

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[Docket ID No. OAR-2002-0085; FRL-]

RIN 2060-AH55

**National Emission Standards for Hazardous Air Pollutants for
Coke Ovens: Pushing, Quenching, and Battery Stacks**

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates national emission standards for hazardous air pollutants (NESHAP) for coke ovens. The final standards establish emission limitations and work practice requirements for control of hazardous air pollutants (HAP) from pushing, quenching, and battery stacks at new and existing coke oven batteries. The HAP emitted from pushing, quenching, and battery stacks include coke oven emissions, as well as polycyclic organic matter (POM) and volatile organic compounds (VOC) such as benzene and toluene. Exposure to these substances has been demonstrated to cause chronic and acute health effects. These final standards will implement section 112(d) of the Clean Air Act (CAA) by requiring all major sources to meet HAP emission standards reflecting application of the maximum achievable control technology (MACT). The EPA previously promulgated emission standards addressing emissions from coke oven charging, topside leaks, and door leaks.

EFFECTIVE DATE: [INSERT DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

ADDRESSES: Docket. The official public docket is the collection of materials used in developing the final rule and is available for public viewing at the EPA Docket Center (EPA/DC), EPA West, Room B102, 1301 Constitution Ave., NW, Washington, DC.

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SUPPLEMENTARY INFORMATION:

Regulated Entities. Categories and entities potentially regulated by this action include:

Category	NAICS*	Example of regulated entities
Industry	331111 324199	Coke plants and integrated iron and steel mills.
Federal government		Not affected.
State/local/tribal government		Not affected.

* North American Industry Classification System

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. To determine whether your facility is regulated by this action, you should examine the applicability criteria in §63.7281 of the final rule. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding FOR FURTHER INFORMATION CONTACT section.

Docket. The EPA has established an official public docket for this action under Docket ID No. OAR-2002-0085. The official public docket consists of the documents specifically referenced in this action, any public comments received, and other information related to this action. Although a part of the official docket, the public docket does not include Confidential Business Information or other information whose disclosure is restricted by statute. The official public docket is the collection of materials that is available for public viewing at the Air Docket in the EPA Docket Center (EPA/DC), EPA West, Room B102, 1301 Constitution Ave., NW, Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742.

Electronic Docket Access. You may access the final rule electronically through the EPA Internet under the "Federal Register" listings at <http://www.epa.gov/fedrgstr/>.

An electronic version of the public docket is available through EPA's electronic public docket and comment system, EPA Dockets. You may use EPA Dockets at <http://www.epa.gov/edocket/> to view public comments, access the index listing of the contents of the official public docket, and to access those documents in the public docket that are available electronically. Although not all docket

materials may be available electronically, you may still access any of the publicly available docket materials through the docket facility in the above paragraph entitled "Docket." Once in the system, select "search," then key in the appropriate docket identification number.

Worldwide Web (WWW). In addition to being available in the docket, an electronic copy of the final rule will also be available on the WWW through the Technology Transfer Network (TTN). Following signature, a copy of the final rule will be placed on the TTN's policy and guidance page for newly proposed or promulgated rules at

<http://www.epa.gov/ttn/oarpg>. The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN HELP line at (919) 541-5384.

Judicial Review. This action constitutes final administrative action on the proposed NESHAP for coke oven pushing, quenching, and battery stacks (66 FR 35326, July 3, 2001). Under CAA section 307(b)(1), judicial review of the final rule is achievable only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by [INSERT DATE 60 DAYS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]. Under CAA section 307(b)(2), the requirements that are the subject of this document may not be challenged later in civil or criminal proceedings brought by EPA to enforce these

requirements.

Outline. The information presented in this preamble is organized as follows:

- I. Background
 - A. What is the source of authority for NESHAP?
 - B. What criteria are used in the development of NESHAP?
 - C. How did we develop the final rule?
- II. Summary of the Final Rule
 - A. What are the affected sources and emission points?
 - B. What are the requirements for pushing?
 - C. What are the requirements for soaking?
 - D. What are the requirements for quenching?
 - E. What are the requirements for battery stacks?
 - F. What are the operation and maintenance (O&M) requirements?
 - G. What are the notification, recordkeeping, and reporting requirements?
 - H. What are the compliance deadlines?
- III. Summary of Responses to Major Comments
 - A. Why did we select a work practice standard for fugitive pushing emissions?
 - B. What changes did we make to the work practice standard for fugitive pushing emissions?
 - C. What changes did we make to the requirements for pushing emission control devices (PECD)?
 - D. What changes did we make to the requirements for quenching?
 - E. What were the major comments on the proposed standard for battery stacks?
 - F. What changes did we make to the requirements for soaking?
 - G. What changes did we make to the O&M requirements?
 - H. Why did we change the compliance dates for existing sources?
- IV. Summary of Environmental, Energy, and Economic Impacts
 - A. What are the air emission reduction impacts?
 - B. What are the cost impacts?
 - C. What are the economic impacts?
 - D. What are the non-air health, environmental and energy impacts?
- V. Statutory and Executive Order Reviews
 - A. Executive Order 12866: Regulatory Planning and Review
 - B. Paperwork Reduction Act
 - C. Regulatory Flexibility Analysis
 - D. Unfunded Mandates Reform Act
 - E. Executive Order 13132: Federalism
 - F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

- G. Executive Order 13045: Protection of Children from Environmental Health & Safety Risks
- H. Executive Order 13211: Actions that Significantly Affect Energy Supply, Distribution, or Use
- I. National Technology Transfer Advancement Act
- J. Congressional Review Act

I. Background

A. What is the source of authority for NESHAP?

Section 112 of the CAA requires the EPA to establish technology-based regulations for all categories and subcategories of major and area sources emitting one or more of the HAP listed in section 112(b). Major sources are those that emit or have the potential to emit at least 10 tons per year (tpy) of any single HAP or 25 tpy of any combination of HAP. We previously listed the category of major sources covered by today's final rule, "Coke Ovens: Pushing, Quenching, and Battery Stacks," on July 16, 1992 (57 FR 31576). This action is a rulemaking under section 307(d) of the CAA.

B. What criteria are used in the development of NESHAP?

Section 112 of the CAA requires that we establish NESHAP for the control of HAP from both new and existing major sources. The CAA requires the NESHAP to reflect the maximum degree of reduction in emissions of HAP that is achievable. This level of control is commonly referred to as MACT.

The MACT floor is the minimum level allowed for NESHAP and is defined under section 112(d)(3) of the CAA. In essence, the MACT floor ensures that the standard is set at

a level that assures that all major sources achieve the level of control at least as stringent as that already achieved by the better-controlled and lower-emitting sources in each source category or subcategory. For new sources, the MACT floor cannot be less stringent than the emission control that is achieved in practice by the best-controlled similar source. The MACT standards for existing sources cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources (for which we have emissions information) in the category or subcategory or by the best-performing 5 sources (for which we have or could reasonably obtain emissions information) for categories or subcategories with fewer than 30 sources.

In developing MACT, we also consider control options that are more stringent than the floor. We may establish standards more stringent than the floor based on the consideration of cost of achieving the emissions reductions, non-air quality health and environmental impacts, and energy impacts.

C. How did we develop the final rule?

We proposed the NESHAP for the Coke Ovens: Pushing, Quenching, and Battery Stacks source category on July 3, 2001 (66 FR 35326). We provided a 90-day comment period for the proposed rule. We received a total of 18 comment letters. A copy of each of these comment letters is

available in the docket for this rulemaking (Docket No. OAR-2002-0085).

The final rule reflects full consideration of all the comments we received. Major public comments on the proposed rule along with our responses to these comments are summarized in this document. A detailed response to all comments is included in the Background Information Document (BID) for the promulgated standards (Docket No. OAR-2002-0085).

Since proposal, six coke plants with 12 batteries have permanently closed. The plants have closed primarily because of the distressed economic condition of the iron and steel industry, and none of the closures are due to the cost of installing emission control systems. The requirements in the final rule take into account the levels of control that have been demonstrated as achievable, including in some cases levels achieved by batteries that are no longer operating. We believe it is appropriate to consider all of the data collected and relied upon for the proposed rule. These data reflect the level of performance of batteries operating concurrently with this rulemaking effort, and provide useful and relevant information about the emission limits that such sources can achieve.

II. Summary of the Final Rule

A. What are the affected sources and emission points?

The affected source is each new or existing coke oven

battery at a plant that is a major source of HAP emissions. A new affected source is one constructed or reconstructed after July 3, 2001. An existing affected source is one constructed or reconstructed on or before July 3, 2001. The final rule covers fugitive pushing emissions, emissions from control devices applied to pushing emissions, and emissions from quenching, soaking, and battery stacks.

B. What are the requirements for pushing?

1. By-product Coke Oven Batteries with Vertical Flues

We proposed two options for controlling fugitive pushing emissions--numerical opacity limits (Option 1) and a work practice standard (Option 2). Based on comments received on the proposed rule and further consideration of the proposed options, we are promulgating a work practice standard.

Under the work practice standard, owners or operators must observe and record the opacity from four consecutive pushes each operating day. If the average opacity of the six highest 15-second consecutive readings for any individual push is more than 30 percent for a short battery or 35 percent for a tall battery, the owner or operator must take corrective action and/or increase coking time to fix the problem within a specified time frame. To demonstrate the corrective action and/or increased coking time was successful, the owner or operator must observe two additional daytime pushes for the oven after completing the

corrective action. If the corrective action is not successful, the owner or operator must take additional corrective action. If the second attempt to fix the problem is not successful, the failure must be reported as a deviation, and the owner or operator must again take corrective action or increase the coking time. Each subsequent failure to fix the problem on the same oven must also be reported as a deviation. We have included provisions to qualify an oven for decreased coking time after it is placed on increased coking time, which requires a demonstration that the opacity is 30 percent or less for a short battery or 35 percent or less for a tall battery when the oven is operated on the decreased coking time. If an oven fails to qualify for decreased coking time, it must be returned to the previously established increased coking time, or the owner or operator may implement some other corrective action or increased coking time. If the facility implements some other corrective action or increased coking time, it must confirm that the selected action was successful. If an individual oven fails to qualify for a decreased coking time in two or more consecutive attempts, the failure on the second and any subsequent attempts must be reported as a deviation.

The final rule requires that observers taking opacity readings to comply with the work practice standard for pushing must be certified according to Method 9 in 40 CFR

part 60, appendix A. Opacity observations begin with the first detectable movement of the coke mass. The plant owner or operator must identify each oven that cannot be read using Method 9 due to obstructions, interferences, or sun angle and must propose alternative procedures to observe these ovens.

To demonstrate initial compliance, the plant owner or operator must certify, as part of the notification of compliance status, that the plant will meet each of the requirements in the work practice standard. Records of all observations and calculations are needed to document continuous compliance. Additional records are required in each instance where pushing emissions from an oven exceed 30 percent opacity for a short battery or 35 percent opacity for a tall battery.

2. By-Product Coke Oven Batteries with Horizontal Flues

Plant owners or operators must prepare and implement a written plan to prevent incomplete coking. The plan must establish minimum flue temperatures at different coking times and a lowest acceptable minimum flue temperature. The minimum temperatures must be established based on a study conducted by the plant that establishes minimum flue temperatures at different minimum coking times and an absolute minimum flue temperature. The plan must be submitted to the Administrator for approval. The authority to approve the work practice plan is retained by the

Administrator and is not delegated to the State, local, or tribal agency.

In implementing the plan, owners or operators must measure and record the temperature of all flues on two ovens per day within the 2 hours before the scheduled push time. If the measured temperature is below the minimum established for an oven's coking time, the coking time must be increased by the amount specified in the plant's written plan. If the flue temperature measurement is below the lowest acceptable minimum temperature, the oven must be removed from service for repairs. If a flue temperature is below the lowest acceptable minimum after return to service, the owner or operator must report the event as a deviation.

No performance test is required to demonstrate initial compliance with the work practice standards. The plant owner or operator must certify, as part of the notification of compliance status, that the plant has submitted the written plan to prevent incomplete coking and the supporting study to the Administrator for review and approval, and that the plant will meet each of the requirements in the work practice standard beginning no later than the first day that compliance is required according to §63.7283 of the final rule. If the plan is disapproved, the owner or operator must revise the plan as directed by the Administrator and re-submit it for approval. If an original or re-submitted plan has not been approved by the applicable compliance

date, the owner or operator must operate in accordance with the last plan submitted to the Administrator.

Plant owners or operators must demonstrate continuous compliance by: (1) measuring and recording flue temperatures for two ovens a day and for all ovens in each battery at least once a month, and (2) recording the time each oven is charged and pushed and the net coking time. Plant owners or operators must keep additional records to show that the correct procedures were followed if any measured flue temperature is below the minimum flue temperature or the lowest acceptable minimum temperature.

3. Non-Recovery Coke Oven Batteries

The final work practice standards require plant owners or operators to visually inspect each oven prior to pushing by opening the door damper and observing the bed of coke. The oven cannot be pushed unless the visual inspection confirms that there is no smoke in the open space above the coke bed, and that there is an unobstructed view of the door on the opposite side of the oven. Plant owners or operators must demonstrate initial compliance by certifying in their initial notification of compliance status that they will follow the work practice standards. Plant owners or operators must demonstrate continuous compliance by maintaining records of each visual inspection.

4. Emission Control Devices

We are establishing emission limits for particulate

matter (PM) as a measure of control device performance. Plant owners or operators that currently use capture and control equipment must continue to use such equipment and must meet the applicable PM emission limits. The limits differ in form and numerical value depending on the type of capture system used (cokeside shed or moveable hood) and whether the control device is stationary (land-based) or mobile. Where a cokeside shed is used as the capture system, the PM limit is 0.01 grain per dry standard cubic foot (gr/dscf). If a moveable hood vented to a stationary control device is used to capture emissions, the PM emission limit is 0.02 pound per ton (lb/ton) of coke pushed. For mobile scrubber cars that do not capture emissions during travel, the emission limits are 0.03 lb/ton of coke for short batteries and 0.01 lb/ton of coke for tall batteries. For mobile scrubber cars that capture emissions during travel, the limit is 0.04 lb/ton of coke.

We have also established operating limits for control devices and capture systems applied to pushing emissions. If a venturi scrubber is used, the daily average pressure drop and scrubber water flow rate must remain at or above the minimum level established during the initial performance test. The final rule provides two options for a capture system applied to pushing emissions: (1) maintain the daily average fan motor amperes at or above the minimum level established during the initial performance test, or (2)

maintain the daily average volumetric flow rate at the inlet of the control device at or above the minimum level established during the initial performance test.

The final rule requires a performance test for each control device to demonstrate it meets the emission limit. The concentration of PM is to be measured using EPA Method 5 or 5D in 40 CFR part 60, appendix A. The testing requirements also include procedures for establishing operating limits for venturi scrubbers and capture systems and for revising the limits, if needed, after the performance test. To demonstrate continuous compliance with the applicable emission limit, plant owners or operators must conduct performance tests for each control device at least twice during each term of their title V operating permit (at midterm and renewal).

If a baghouse is applied to pushing emissions, plant owners or operators must monitor the relative change in PM loading using a bag leak detection system and make inspections at specified intervals. The basic inspection requirements include daily, weekly, monthly, or quarterly inspections of specified parameters or mechanisms with monitoring of bag cleaning cycles. Each bag leak detection system must be capable of detecting PM at concentrations of 10 milligrams per actual cubic meter or less and provide an output of relative PM loading, and be installed and operated

according to EPA guidance.¹ If the system does not work based on the triboelectric effect, it must be installed and operated consistent with the manufacturer's written specifications and recommendations. In addition, the bag leak detection system must be equipped with an alarm system that will alert operators if PM is detected above a preset level. The proposed requirement that a bag leak detection system must not sound for more than 5 percent of the time in a semiannual period has been deleted from the final rule.

To demonstrate continuous compliance, the final rule requires plant owners or operators to maintain records of corrective actions taken in response to bag leak detection system alarms. They must also keep records documenting conformance with the inspection and maintenance requirements.

If a venturi scrubber is applied to pushing emissions, plant owners or operators must monitor the daily average pressure drop and scrubber water flow rate using continuous parameter monitoring systems (CPMS). The CPMS must measure and record the pressure drop and scrubber water flow rate at least once per push and determine and record the daily average of the readings. To demonstrate continuous compliance with the operating limits, plant owners or operators must maintain the daily average pressure drop and

¹"Fabric Filter Bag Leak Detection Guidance," EPA 454/R-98-015, September 1997, available on the TTN at <http://www.epa.gov/ttnemc01/cem/tribo.pdf>

scrubber water flow rate at levels no lower than those established during the performance test. Valid monitoring data must be available for all pushes.

Section 63.7331 of the rule establishes requirements for the installation, operation, and maintenance of continuous monitoring systems. The final rule requires owners or operators to prepare a site-specific monitoring plan for CPMS that addresses installation, performance, operation and maintenance, quality assurance, and recordkeeping and reporting procedures. These requirements replace the more detailed performance specifications contained in the proposed rule.

For a capture system applied to pushing emissions, plant owners or operators are required to check the fan motor amperes or the volumetric flow rate at least once each 8-hour period to verify the daily average is at or above the level established during the initial performance test and to record the results of each check.

C. What are the requirements for soaking?

The final rule contains a work practice standard to address emissions that occur during soaking, which is the period prior to pushing when an oven is dampered off the collecting main and vented to the atmosphere through an open standpipe to relieve oven pressure. Plant owners or operators must prepare and implement a plan to mitigate potential soaking emissions. Each plan must include

measures and procedures to train topside workers to identify the cause of soaking emissions and to take corrective measures to reduce or eliminate such emissions.

If soaking emissions are caused by leaks from the collecting main, actions must be taken to eliminate the emissions, such as reseating the damper, cleaning the flushing liquor piping, applying aspiration, putting the oven back on the collecting main, or igniting the emissions. If soaking emissions are not caused by leaks from the collecting main, a designated responsible party must be notified, who must then determine whether the cause of emissions is incomplete coking. If so, the oven must either be put back on the collecting main until coking is complete, or the emissions must be ignited.

To demonstrate initial compliance, the plant owner or operator must certify, as part of the notification of compliance status, that the plant has submitted the written plan for soaking to their permitting authority for review and approval, and that each of the requirements in the work practice standard will be met beginning no later than the first day that compliance is required according to §63.7283 of the final rule. To demonstrate continuous compliance, plant owners or operators must keep records documenting conformance with these requirements.

D. What are the requirements for quenching?

The equipment and work practice standards for quenching

apply to all coke oven batteries. Each quench tower must be equipped with baffles such that no more than 5 percent of the cross sectional area of the tower may be uncovered or open to the sky. Baffles must be cleaned each day that the quench tower is used except when the highest measured ambient temperature during the day is below 30 degrees Fahrenheit. Each quench tower must be inspected at least monthly for damaged or missing baffles and blockage. If the monthly inspection reveals any damaged or missing baffles, plant owners or operators must initiate repairs within 30 days and complete repairs as soon as practicable.

The final rule also limits the total dissolved solids (TDS) content of water used for quenching to 1,100 milligrams per liter (mg/L). The final rule includes an alternative to the TDS limit that achieves an equivalent level of HAP control. The plant owner or operator may establish a site-specific constituent limit for the HAP that are characteristic of coke oven emissions (benzene, benzo(a)pyrene, and naphthalene). The constituent limit is based on analyses of at least nine samples of the quench water for TDS, benzene, benzo(a)pyrene, and naphthalene. The HAP limit is the highest sum of the concentrations of the HAP in any single sample that meets the TDS limit of 1,100 mg/L. We also replaced the definition of "clean water" with a definition of "acceptable makeup water," which includes surface water from a river, lake, or stream; water

meeting drinking water standards; storm water runoff and production area clean up water except for water from the by-product recovery plant area; process wastewater treated to meet effluent limitations guidelines; any of these types of water that have been used only for non-contact cooling or in water seals; or water from scrubbers used to control pushing emissions.

To demonstrate initial compliance, the plant owner or operator must certify, as part of the notification of compliance status, that the equipment standard has been met, and that the work practice requirements regarding baffle repair and cleaning will be met beginning no later than the first day that compliance is required according to §63.7283 of the final rule. The owner or operator must also conduct an initial performance test to demonstrate that the TDS content of quench water does not exceed 1,100 mg/L or that the concentration of benzene, benzo(a)pyrene, and naphthalene does not exceed the site-specific constituent limit. To demonstrate continuous compliance, plant owners or operators are required to maintain baffles in each quench tower to meet the rule requirements, test quench water for TDS at least weekly or at least monthly for benzene, benzo(a)pyrene, and naphthalene, and keep records documenting conformance with the work practice requirements regarding baffle repair and cleaning.

Backup quench stations at existing coke oven batteries

that are used for less than 5 percent of the quenches in a 12-month calendar period are not subject to the baffle requirements for quench towers. However, backup quench stations at new batteries are subject to the requirements for baffles.

E. What are the requirements for battery stacks?

The final rule requires plant owners or operators to monitor the opacity of emissions from each battery stack using a continuous opacity monitoring system (COMS) and to meet specified opacity limits at all times. The opacity limits are a daily average of 15 percent for a by-product coke oven battery on a normal coking cycle and a daily average of 20 percent for a by-product coke oven battery on a batterywide extended coking cycle. A battery is on batterywide extended coking if the average coking time for all ovens in a battery is increased by 25 percent or more over the manufacturer's specified design rate.

Initial compliance must be demonstrated through a performance test using a COMS. The opacity of emissions from each battery stack must be monitored for 24 hours and the daily average determined. A performance evaluation is also required to show that the COMS meets Performance Specification (PS) 1 in appendix B to 40 CFR part 60. To demonstrate continuous compliance, plant owners or operators must monitor opacity using the COMS and determine and record the 24-hour average opacity.

F. What are the operation and maintenance (O&M) requirements?

All plant owners or operators are required to prepare and implement a written startup, shutdown, and malfunction plan according to the O&M requirements in 40 CFR 63.6(e). Operation and maintenance plans are also required for each by-product coke oven battery and for capture systems and control devices applied to pushing emissions.

The plan for general O&M of each by-product coke oven battery must address procedures (and frequency of measurements, where appropriate) for underfiring gas parameters, flue and cross-wall temperatures, preventing ovens from being pushed before they are fully coked, preventing overcharging and undercharging of ovens, and inspecting flues, burners, and nozzles.

The O&M plan for capture systems and control devices applied to pushing emissions must describe procedures for monthly inspections of capture systems, preventative maintenance requirements for control devices, and corrective action requirements for baghouses. In the event of a bag leak detection system alarm, the plan must include specific requirements for initiating corrective action to determine the cause of the problem within 1 hour, initiating corrective action to fix the problem within 1 working day, and completing all corrective actions needed to fix the problem as soon as practicable.

To demonstrate initial compliance, plant owners or operators must certify in their notification of compliance status that they have prepared the plan according to the rule requirements and that the plant will operate according to the plan beginning no later than the first day that compliance is required under §63.7283 of the final rule. To demonstrate continuous compliance, plant owners or operators must adhere to the requirements in the plan and keep records documenting conformance with these requirements.

G. What are the notification, recordkeeping, and reporting requirements?

The notification, recordkeeping, and reporting requirements rely on the NESHAP General Provisions in 40 CFR part 63, subpart A. Table 1 of the final rule (subpart CCCCC) shows each of the requirements in the General Provisions (§§63.2 through 63.15) and whether they apply.

The final rule requires the owner or operator to submit each initial notification in the NESHAP General Provisions that applies to them. An initial notification of applicability with general information about the plant must be submitted within 120 days of [INSERT DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER] (or for a new affected source, 120 days after becoming subject to the rule). A notification of performance tests must be provided at least 60 calendar days before each test. A notification of compliance status must be submitted within 60 calendar

days of the compliance demonstration if a performance test is required or within 30 calendar days if no performance test is required. For the work practice standard for pushing for a by-product coke oven battery with horizontal flues, plant owners or operators must provide prior written notification of the date the study of flue temperatures will be initiated. Other notification requirements that may apply are shown in Table 1 of the final rule (subpart CCCCC).

The final rule requires plant owners or operators to maintain the records required by the NESHAP General Provisions that are needed to document compliance, such as performance test results; copies of startup, shutdown, and malfunction plans and associated corrective action records; monitoring data; and inspection records. All records must be kept for a total of 5 years, with the records from the most recent 2 years kept onsite. The final rule also requires that the current O&M plans be kept onsite and available for inspection upon request for the life of the affected source or until the affected source is no longer subject to the rule requirements.

We revised the reporting requirement for battery stacks from monthly to quarterly in response to comments. For other affected sources, semiannual reports are required for any deviation from an emission limitation (including an operating limit), work practice standard, or O&M

requirement. Each report is due no later than 30 days after the end of the reporting period. If no deviation occurred and no continuous monitoring systems were out of control, only a summary report is required. If a deviation did occur, more detailed information is required.

An immediate report is required if there were actions taken during a startup, shutdown, or malfunction that were not consistent with the startup, shutdown, and malfunction plan. Deviations that occur during a period of startup, shutdown, or malfunction are not violations if the owner or operator demonstrates to the permitting authority that the source was operating in accordance with the startup, shutdown, and malfunction plan.

H. What are the compliance deadlines?

We revised the compliance date for an existing affected source from 2 years to 3 years after [INSERT DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]. New or reconstructed sources that startup on or before [INSERT DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER] must comply by [INSERT DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]. New or reconstructed sources that startup after [INSERT DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER] must comply upon initial startup.

III. Summary of Responses to Major Comments

A. Why did we select a work practice standard for fugitive

pushing emissions?

We proposed an opacity standard for fugitive pushing emissions as one potential option for controlling sources in the category. Because we were uncertain about the feasibility of an opacity standard for this emission point, we also proposed a work practice standard. We refer to the opacity standard as Option 1 and the work practice standard as Option 2. Both options would require observing four consecutive pushes per day and determining the average opacity of each push. The opacity limits proposed were 20 percent for short batteries and 25 percent for tall batteries based on the average of four pushes. We proposed a work practice standard that would be triggered if the average opacity of any single push exceeded 30 percent for short batteries and 35 percent for tall batteries.

Comment. Four commenters stated a preference for a work practice standard. Two commenters said that EPA has not and cannot adequately subcategorize batteries to account for the range in performance achievable by batteries implementing a state-of-the-art O&M program for the minimization of green pushes. The commenters stated there are not enough data to set standards for each subcategory reflecting the performance of the top sources over time and under the worst foreseeable conditions. Therefore, the opacity standard (Option 1) must be rejected.

One commenter prefers an opacity standard over a work

practice standard because he believes a work practice standard could cause several problems: (1) it would not allow them to effectively manage their long-term wall and end flue replacement program; (2) the constant change from taking ovens out of service and putting them back into service would result in damage to the battery; and (3) many of the actions required by the work practice standard would disrupt the heating system, damage refractory, and increase emissions in other areas of the battery.

Three commenters urged EPA to combine the opacity standard with the work practice standard. One commenter noted that the opacity standard does not require that an oven be repaired, and the work practice standard may not be sufficient to keep a problem oven from continuing to operate. Two commenters prefer a combination because it would more closely approach their existing State standards. Another commenter prefers the opacity standard but would support combining it with the work practice standard if it improved compliance.

Response. The insight provided by several commenters and further consideration of the two options we proposed lead us to conclude that a work practice standard that requires owners or operators to take appropriate corrective action and to confirm that they have successfully addressed problem ovens is the most effective approach to control fugitive pushing emissions. A work practice standard is

appropriate because pushing emissions are fugitive in nature and are not emitted through a conveyance designed to capture and control HAP. Moreover, there is no practicable measurement methodology to determine the mass emission rate of HAP in these fugitive emissions. Section 112(h) of the CAA explicitly permits a work practice standard in lieu of an emission standard when emissions cannot be emitted through a conveyance.

We concluded an opacity limit as proposed would not be appropriate because coke oven batteries cannot entirely avoid green pushes. While facilities can significantly reduce the frequency of green pushes by carefully monitoring emissions and responding quickly to diagnose and repair problem ovens, they cannot eliminate them altogether. (For example, a flue may become plugged unexpectedly during coking.) Any steps that we might take to allow for the periodic exceedance of an emission limit (such as averaging across several pushes) would undermine the purpose of the standard by allowing malfunctioning ovens to continue operating without diagnosis or repair. Therefore, the most meaningful approach is to establish a work practice standard that requires coke oven facilities to identify and successfully remedy problems that result in increased emissions. Accordingly, considering the nature of the pushing operation, it is appropriate for EPA to establish a work practice standard that uses opacity observations to

identify problem ovens (those which produce green pushes) and requires corrective action to diagnose and correct the problem.

There was a fundamental flaw in the opacity standard as proposed in that it would not ensure that an oven producing green pushes is repaired. If the four-push average exceeds the opacity standard, one or more of the ovens may have serious problems that require immediate attention to prevent subsequent green pushes. However, these problem ovens would not have to be observed again for 90 days, and during that 90-day period, many green pushes could occur.

Additionally, an opacity standard based on the average of four pushes does not reliably indicate when a green push has or has not occurred. We analyzed data from two batteries that had frequent green pushes to compare the effectiveness of the opacity standard and work practice standard in identifying green pushes. We found cases where the four-push average had one oven with a green push (an opacity of more than 30 percent), but the proposed opacity standard was not exceeded because the other pushes had low opacity. We also found cases where the 20 percent opacity standard was marginally exceeded, but none of the pushes were green (i.e., all four pushes were less than 30 percent).

In contrast, the work practice standard is triggered by opacity observations of individual ovens. When a green push

occurs, the problem oven is identified. This oven is then placed on a remedial track that requires appropriate repairs in a reasonable period of time. Consequently, the work practice standard will not allow green pushes to occur unabated.

Several commenters urged us to combine the performance standard (an opacity limit) with the work practice standard. While we are not adopting a specific performance standard in the form of a hard and fast opacity limit, and we do not believe that such a standard would provide a feasible mechanism for identifying and remediating individual problem ovens, we do recognize the benefits of having a mechanism to prevent ongoing failure to repair problem ovens.

Therefore, we have revised the work practice standard to ensure that ovens are properly repaired. As proposed, the work practice standard could have allowed individual problem ovens to continue to operate, while cycling through corrective actions without ever being properly repaired. Consequently, we revised the work practice standard to require an owner or operator to report a deviation after two consecutive unsuccessful attempts at corrective action and/or increased coking time and after two consecutive unsuccessful attempts to decrease coking time on the same oven. In addition, subsequent consecutive failures to repair or remediate the same oven must be reported as deviations. There is adequate time provided to correct any

problems during the two attempts--20 days or more. An owner or operator may also remove an oven from service for as long as necessary to conduct repairs. This approach accurately reflects the performance of the best-controlled facilities in the category that already implement oven diagnosis and repair programs to successfully identify and remedy problems that lead to increased emissions. Most of the best-controlled batteries will seldom have an oven that enters the oven-directed program, and our data show that none have had the types of continuing problems that would result in a deviation under the final rule.

We believe that the work practice standard can be coordinated with a long-term repair program. The batteries upon which the MACT floor is based have a long-term repair program to address major repairs. This long-term program includes procedures for minimizing impacts on adjacent ovens and preventing excess emissions when ovens must be removed from service. In addition, these batteries have effective procedures for identifying problem ovens and making short-term repairs. There is no legitimate reason why this type of approach cannot be implemented at other coke oven batteries.

B. What changes did we make to the work practice standard for fugitive pushing emissions?

Comment. Four commenters requested revisions to the work practice standard. They requested that the final rule

require that all pushes be read exactly according to EPA Method 9 (40 CFR part 60, appendix A). They suggested that Method 9 observations begin with the first detectable movement of the coke mass because this would ensure that observations are made through the entire pushing sequence and would be consistent with how the data were generated for the proposed rule. They also requested that we not require "independent certified observers" because all Method 9 certified observers are qualified and should be treated the same.

The commenters asked that we allow the observation of more than four pushes per day so that every oven can be observed at least once every 3 months. In addition, the commenters asked that we clarify that the pushing schedule can be changed for operational reasons, but not "solely" for the purpose of changing the sequence of observations. They suggested we add a definition for "increased coking time" to prevent confusion with "batterywide extended coking time," which is a term used only in the provisions for battery stacks.

Response. We agree with some of these suggested revisions and do not agree with others. We do not agree that all ovens must be read exactly as required by Method 9 (40 CFR part 60, appendix A) because we are aware that the view of opacity from some ovens may be obstructed within the sector required by the method. In this situation, the

observer may need to find an alternative position to make opacity observations. We added a provision to the final rule requiring plant owners or operators to identify ovens that cannot be observed according to Method 9 and develop alternative procedures to determine if green pushes are occurring on those ovens. The alternative procedures must be submitted to the permitting authority for review and approval. Facilities must operate according to these procedures beginning no later than the applicable compliance date. Based on the information we received, there are only a few ovens that fall into this category.

We have written the final rule to state that Method 9 observations should begin with the first detectable movement of the coke mass. In addition, we agree that any Method 9 certified observer is qualified to make Method 9 opacity observations and have changed the provision to reflect this. We also agree that more than four ovens may be observed each day because doing so provides more scrutiny of performance and greater assurance that every oven can be observed at least once every 90 days.

With respect to the comment on changing pushing schedules, we do not believe that the precise language that the commenter suggests is appropriate (specifically the word "solely" would create an extraordinarily difficult burden of proof for purposes of enforcement). However, we do agree with the general idea underlying the commenter's

recommendation, and we have written the final rule to acknowledge that there may be legitimate operational reasons for changing the pushing schedule. If an oven's pushing schedule is changed and that oven was previously scheduled to be one of the four consecutive ovens to be observed, the operator must keep records to document the legitimate operational reason for changing the schedule. We have added a definition for "increased coking time" to prevent confusion with "batterywide extended coking time," which is a term used only in the provisions for battery stacks.

Comment. Several commenters said that the rule should not mandate that an oven be taken out of service if corrective actions are unsuccessful. In addition, commenters requested that after taking corrective actions or extending the coking time, we allow two coking cycles before requiring the facility to demonstrate that the action was successful. They believe it is necessary to observe only one push rather than two to show the action was successful. Finally, the commenters asked that we drop the requirement to obtain the permitting authority's permission to return an oven to service and instead change this to a notification requirement.

Response. We added a provision that requires plant owners or operators to report a deviation after two unsuccessful attempts at repair, and with this requirement, we believe that it is not necessary to require that an oven

be removed from service. Our goal at proposal was to require that an oven be removed from service for repair to avoid endless cycling of unsuccessful repairs. This is accomplished in the final rule by requiring that the owner or operator repair the problem oven, and by requiring the owner or operator to bring any two or more consecutive failures to repair the same oven to the attention of the permitting authority by reporting the failure(s) as a deviation.

Based on the comments requesting more time to fix problem ovens before they are removed from service, we investigated the time that might reasonably be required to take corrective action and to demonstrate that it was successful. We discovered that there can be some situations in which it would be difficult to obtain valid opacity observations within the time period in the proposed rule. For example, the opportunity to make opacity observations according to the prescribed procedures depends on coking time, number of daylight hours, sun angle, and other factors. In some cases, it may take several days to meet the criteria in the opacity procedures for a specific oven, especially during the winter months for ovens with 22 to 26 hour coking times. Consequently, we have written the final rule to require that the opacity observations to demonstrate that corrective action and/or increased coking time was successful be made on the first two pushes that can be

observed according to the procedures for opacity observations after the allowed number of days. We decreased the time period to complete corrective action or increase coking time because the time period no longer includes the demonstrative observations. We have written the final rule to allow either 10 days or the number of days determined using an equation, whichever is greater. Depending on coking time, the time period allows batteries 10 to about 20 days to diagnose the problem, implement corrective action or increased coking time, and stabilize oven temperatures. After that period, the next two pushes that can be observed according to the procedures must be observed to evaluate the success of corrective action. Days during which the oven is removed from service do not count in the allowed number of days. We also revised the standard to allow two attempts at repair in case the problem is not initially diagnosed properly or in case a second independent problem develops.

We do not agree that two coking cycles are always necessary to stabilize an oven after corrective actions are taken. We believe there is one case in which two coking cycles are needed to allow the oven temperature to stabilize--when an oven that was placed on increased coking time has been repaired and the owner or operator attempts to qualify for decreased coking time. We have written the final rule to reflect this. There is adequate time within the allowed number of days following corrective action or

increased coking time to allow the oven temperatures to stabilize. Adequate time is also provided for ovens removed from service because the time during which the oven is not operating is not counted in the allowed number of days. Relative to the comment that only one observation is needed to demonstrate the problem has been corrected, we continue to believe that two pushes should be observed rather than one to provide assurance that the repair was successful.

We agree that it is not necessary for a permitting authority to approve returning an oven to service, and the permitting authority may not be able to act within a time frame that is consistent with the legitimate needs of the operator. In addition, this requirement places a burden on the permitting authority that they may not want and may not have the resources or expertise to implement.

Comment: Three commenters stated that batteries with horizontal flues would be subject to significantly less stringent standards than batteries with vertical flues. They requested that these batteries be subject to the same pushing requirements as by-product batteries with vertical flues.

Response: As stated in the proposal preamble, unlike vertical flue batteries which include 25 to 37 individual flues along each oven wall, the horizontal flue system of the Semet Solvay design includes only five horizontal flues which convey the combustion gases from top to bottom in

serpentine fashion. Because the hot combustion products flow from one flue to the next, the heat control of each upper flue materially affects the heating conditions in the next flue down. Each flue in the horizontal design affects a larger percentage of the total coke mass than for the vertical flue design. Consequently, the occurrence of a heating or combustion problem in any of the single horizontal flues could have a significant adverse effect on the degree and uniformity of coking across the entire length of the coke bed. Therefore, since these differences in design and operation affect pushing emissions, we developed a separate subcategory for batteries with horizontal flues. There are two batteries with this design, and the work practice standard is based on the procedures used by these batteries to prevent green pushes. We have received no technical information that indicates this subcategorization was inappropriate.

However, after we reviewed the proposed work practice standard, we concluded a revision was needed to ensure that a source would not be permitted to operate its ovens below the lowest acceptable minimum flue temperature. The source is required to evaluate coking time, coking temperature, and factors associated with incomplete coking to develop minimum flue temperatures and coking times. The source must then submit to the Administrator (or delegated authority) for review and approval a written plan that establishes minimum

flue temperatures for different coking times, and that establishes the lowest acceptable minimum flue temperature for oven operation. The plan must also include appropriate operation and maintenance procedures to ensure compliance upon plan implementation.

C. What changes did we make to the requirements for pushing emission control devices (PECD)?

Comment. Two commenters stated that there is no legal basis for setting MACT standards for PECD given EPA's conclusion at proposal that PECD are not part of the MACT floor for pushing. One commenter also stated that EPA has no legal authority to set operating limits for PECD because they are simply a surrogate for the underlying emission limits. In addition, PECD should not be regulated because the emissions do not contain HAP. The commenter said the limits and monitoring are not necessary and are duplicative of other existing requirements, including State implementation plans, title V permits, and the compliance assurance monitoring program.

Response. We believe emission limits for PECD are appropriate and warranted. As we explained in the preamble to the proposed rule, there are several reasons we do not believe it is appropriate to include PECD as a component of the MACT floor for pushing. However, we also indicated at proposal that operation of these controls does have some HAP reduction benefits (although we are unable to specifically

quantify these benefits in terms of either HAP or PM), and there is little doubt that these devices help to reduce HAP emissions, including POM and trace metals. Thus, while minimizing the frequency of green pushes is the basis for the MACT floor, and achieving this objective will significantly decrease the emission benefits of the add-on control devices, these devices will continue to reduce HAP emissions to some degree on a continuing basis. The EPA has reasonably concluded that it is important to ensure that the benefits related to the operation of these controls are maintained, and the appropriate way to accomplish this is to require that coke plants operate existing PECD at all times in a manner consistent with good air pollution control practices. Accordingly, today's requirements establish emission limitations for existing control devices that reflect the performance of well-operated PECD. The costs associated with the PECD requirements include those for periodic Method 5 testing, parametric monitoring (such as bag leak detection systems), and monthly inspections of capture and control systems. These costs are only \$4,600 per year for a typical coke plant, which is a minimal cost relative to the overall costs of the final rule (less than 0.5 percent). While we are not able to quantify the HAP emission reductions associated with operation of PECD or with the PECD requirements in the final rule, we believe the requirements preserving these existing benefits of PECD's

and ensuring proper operation of control devices is warranted. For example, bag leak detection systems and monthly inspections will ensure that corrective actions are taken promptly when the systems are not operating properly, and these actions will reduce excess emissions that might have occurred in the absence of the continuous monitoring.

We do not believe that the limits will duplicate existing State requirements because the limits are generally equivalent to or more stringent than those currently required by State agencies or contained in existing operating permits. By establishing these limits in national standards, we will ensure that emissions from PECD do not increase in the future if existing State limits are relaxed or if operating permits are modified.

Comment. One commenter stated that the proposed emission limits are based on very limited data and that the limits are not achievable. In support of this claim, the commenter submitted statistical analyses that indicate that their "statistically-derived values" are much higher than the proposed limits and should be used in lieu of the proposed values. Several commenters submitted additional test data for EPA to consider and asked for higher limits.

Response. We reviewed the additional test data submitted by the commenters. These new data include additional tests on mobile scrubber cars used on short batteries and baghouses applied to cokeside sheds. We also

reexamined our approach for selecting appropriate emission limits. We believe that it is not necessary to use statistical analyses to account for variability because these control devices operate uniformly over time, and the data indicate there is little variability when the device is operating properly. In addition, we have data for most of the affected control devices, including multiple tests for some units. We believe the large database inherently accounts for variability and choosing the highest three-run average means that 100 percent of the test results are below the limit. However, to account for inherent variability in the performance of the control devices (to more accurately reflect the actual performance of existing controls over time), we established the limits in the final rule by rounding the highest test results to two decimal places.

The two additional tests for mobile scrubber cars used on short batteries include one result slightly below the proposed limit and another slightly higher than the proposed limit. The tests were conducted using approved methods and appear to be representative of normal operation. In addition, the results expanded the database for this subcategory from three tests to five tests. The averages for the five tests ranged from 0.012 to 0.025 lb/ton of coke. We rounded 0.025 lb/ton to 0.03 lb/ton and established this value as the limit for mobile scrubber cars for short batteries.

We also reviewed additional test data for three batteries equipped with a cokeside shed and baghouse, including three tests conducted on a 6-meter battery at one plant and four tests conducted on two 4-meter batteries designated Batteries 1 and 4 at a second plant. The proposed limit for existing cokeside sheds and baghouses was 0.004 gr/dscf. With the additional data, we now have results for ten tests at five batteries with cokeside sheds and baghouses. All three tests on the 6-meter battery are below the proposed limit of 0.004 gr/dscf with values of 0.0009, 0.0024, and 0.0013 gr/dscf.

The additional data for the two 4-meter batteries plus one test result which we previously had gives us a total of five tests for that plant, four tests for Battery 1 and one test for Battery 4. The company acknowledged that a 1984 test which averaged 0.02 gr/dscf was performed under unrepresentative conditions because of operational problems with the baghouse during the test. We examined the other test reports for Battery 1 and found that a test conducted in 1984 averaged 0.004 gr/dscf, a 1988 test averaged 0.0036 gr/dscf, and a 1998 test averaged 0.01 gr/dscf. The test reports indicate that sampling was performed under representative conditions. Consequently, we revised the emission limit for batteries with cokeside sheds to 0.01 gr/dscf to reflect the level that has been demonstrated as achievable.

No additional data were submitted for two types of capture and control systems: mobile scrubber cars on tall batteries and mobile scrubber cars that capture during travel. We chose as limits the highest three-run average for each of these systems--0.01 lb/ton for mobile scrubber cars on tall batteries and 0.04 lb/ton for mobile scrubber cars that capture during travel. We believe the data show that these limits are achievable because they have been achieved at several different batteries over time.

Comment. One commenter requested that the 5 percent operating limit for bag leak detection system alarms be deleted. The commenter argued that the 5 percent of the operating time limit on alarms is arbitrary. In addition, the commenter stated that EPA had not demonstrated that a bag leak detection system is workable for pushing emissions given the intermittent operation of PECD (e.g., 1 to 2 minutes during a push, which occurs every 15 to 20 minutes).

Response. We reexamined the proposed operating limit of 5 percent for bag leak detection systems and concluded it was not applicable for PECD. The proposed limit was adopted from other rules and was not based on data associated with baghouses applied to pushing emissions. We do not believe we can establish an appropriate limit in this application because of the intermittent operation of baghouses. For most systems, the device operates only during the push, which is 1 to 2 minutes every 10 to 15 minutes. In

addition, we have no information on the effect of the initial surge when full evacuation is applied at the beginning of the push. Thus, given that emissions from PECD are not the major focus of today's final rule and are not included as part of the MACT floor calculation, we believe it is appropriate to delete the 5 percent operating limit for bag leak detection systems. However, we are requiring that corrective actions be initiated within 1 hour of an alarm.

D. What changes did we make to the requirements for quenching?

Comment. One commenter stated that the definition of "clean water" needs to be clarified because it would be difficult or impossible for plant owners or operators to prove that some sources of water meet the definition. As proposed, "clean water" is defined to mean surface water from a river, lake, or stream; water meeting drinking water standards; water that has been used for non-contact cooling; or process wastewater that has been treated to remove organic compounds and/or dissolved solids. The commenter recommended that the definition be revised to state that any water can be used except untreated process wastewater from the by-product plant. Another commenter agreed and further stated that plant owners or operators should be allowed to use any source of makeup water that has been used historically and previously deemed acceptable by EPA. One

commenter requested that the definition include water that is used in seals on standpipes; otherwise, the plant owner or operator would have to draw an additional 200,000 gallons per day from Lake Michigan and treat the same amount of water before discharge. Another commenter requested that storm water and wash down water associated with non-recovery plants be added. The commenter stated that this water does not pick up toxic chemicals at non-recovery plants, and using this water for quenching eliminates discharge to the watershed and reduces the amount of water drawn from the water supply.

Other commenters requested that the proposed definition of "clean water" be tightened by developing minimum quality standards for quench water. Two commenters suggested that "clean water" be defined as meeting Federal safe drinking water standards. Two other commenters asked that EPA establish a limit for TDS because the solids contain metals. Commenters also noted that the definition includes process water that has been treated to remove organic compounds and/or dissolved solids. They stated that removal of both solids and organics should be required, and EPA must establish appropriate levels of treatment. If an appropriate level of treatment cannot be defined, then all process wastewater should be prohibited for quenching coke. One commenter suggested that return water from the quench tower and all process wastewater be prohibited, whether

treated or not. This commenter further stated that if EPA chooses to allow treated process water, then daily sampling and analysis must be required to ensure the treatment process is removing the contaminants.

Response. We agree that altering the definition of "clean water" is necessary to clarify what types of water can be used as makeup water. We also agree that it is appropriate to establish TDS limits to control quench water quality. Our intent at proposal was that untreated process wastewater, whether contaminated with solids, organic compounds, or both, should not be used for quenching. These contaminants have been shown to increase HAP emissions from quenching, and most plants have abandoned the practice of disposing of untreated wastewater in the quenching process.

Process wastewater must be treated to remove solids and organics, as necessary, before it can be used for quenching. This can be ensured by requiring that process wastewater be treated to meet effluent limitation guidelines. It was not our intent to prohibit the use of non-contact process water, cooling water, or other miscellaneous sources of water that would not contribute to additional emissions from pushing. For example, the water used to seal standpipe caps and storm water are not process wastewater. To address the above concerns, we have replaced the term "clean water" in the proposed rule with the term "acceptable makeup water," which is defined in the final rule to mean surface water from a

river, lake, or stream; water meeting drinking water standards; storm water runoff and production area cleanup water except for water from the by-product recovery plant area; process wastewater treated to meet effluent limitations guidelines; any of these types of water that has been used only for non-contact cooling or in water seals; or water from scrubbers used to control pushing emissions. We believe this change accommodates most if not all of the concerns stated in the comments.

Water used for quenching is usually taken from a sump near the base of the quench tower and consists of recycled water and makeup water. Recycled water is the runoff from quenching that is returned from the quench tower to the sump. Makeup water is from some other source, such as a river or lake, and is added to replenish the water lost by evaporation during quenching. Dissolved solids in the quench water contribute to HAP and PM emissions during quenching. We reviewed data from tests at quench towers and found that HAP emissions increase as the TDS level in the quench water increases. Several States have established TDS limits for the quench water to ensure that high levels of solids are not present to contribute to emissions from the quench tower. We agree with commenters who requested that TDS limits be established in the final rule and that the quench water be sampled periodically. We reviewed the available data on TDS levels in quench water. However, we

have only limited data, much of the data included the use of by-product plant wastewater which is no longer used for quenching, and we could not validate the procedures that were used for sampling and analysis by the various plants. In addition, we have only one data point for reporting plants, which does not reflect the variability in TDS levels over time.

We also reviewed existing State and local TDS requirements and found that most of the existing limits are in the range of 800 to 1,500 mg/L. We evaluated the five most stringent State limits (12 percent of 36 quench towers) applied to quench towers at coke plants that were operating during the development of the proposed rule. Two quench towers (one in Michigan and one in Ohio) are subject to a limit of 800 mg/L, two others in Illinois are subject to a limit of 1,200 mg/L, and one in Illinois is subject to a limit of 1,500 mg/L. We chose the mean value of 1,100 mg/L as the MACT floor. We chose the mean value rather than the median value (1,200 mg/L) because we usually use the median value when that value is associated with a specific source and the operation of a particular emission control technology. In this case, the mean value is more appropriate because the State limits are not directly related to the level of control achieved by a particular control technology.

We also evaluated the test method used by the plants

that comprise the MACT floor and determined that all of these plants measure TDS by drying the filterable residue at 103 to 105°C. (There is an alternative TDS method that specifies drying at 180°C.) Our data indicate that the lower drying temperature is more appropriate for coke plant quench water because the higher temperature evaporates some organic PM and results in an inaccurate measure of TDS. This organic PM contributes to the total TDS and emissions at the normal temperatures of the quench water before it is used for quenching. Consequently, we specify that TDS must be determined by drying the filterable residue at 103 to 105°C.

We believe the existing limits are a reasonable proxy for TDS levels that can be achieved, and they account for the normal variability in TDS levels. For example, the available data indicate that TDS concentrations in clean makeup water are usually less than 600 mg/L. We reviewed data for several plants and concluded that TDS in quench water is about twice that in makeup water. Therefore, we believe a level of 1,100 mg/L TDS or less is indicative of acceptable quench water. Consequently, we are establishing this level in the final rule as the maximum TDS allowed in quench water. We are also requiring weekly sampling of the quench water to ensure that water quality is maintained.

Although a TDS limit is a proven historical method for limiting emissions from quenching, we believe that plant

owners or operators can achieve equivalent levels of HAP control by limiting the HAP in quench water. To provide additional flexibility, we included in the final rule an alternative to develop a site-specific limit for the quench water for the HAP that are indicators of coke oven emissions - benzene, benzo(a)pyrene, and naphthalene. To qualify for the alternative, a plant owner or operator must sample and analyze at least nine quench water samples for TDS, benzene, benzo(a)pyrene, and naphthalene. The alternative HAP limit is the highest sum of the concentrations of the HAP in any single sample that meets the TDS limit of 1,100 mg/L.

Comment. Two commenters noted that baffles control PM and that EPA had not explained why PM is a suitable surrogate for HAP emissions from quenching. One commenter said that the requirement for 95 percent coverage of quench towers by baffles is unclear and that coverage cannot be measured. Another commenter stated that the 95 percent coverage requirement is too lenient and will allow the release of significant emissions. The commenter noted that two layer baffles which cause two changes in flow direction have been installed and successfully used at coke plants in Allegheny County, Pennsylvania.

Several commenters stated that it is difficult or impossible to wash and repair baffles in cold and inclement weather because water lines freeze and severe weather makes the process dangerous. One commenter said the company does

not allow work on the quench tower during freezing weather due to safety concerns. One commenter recommended that baffles be cleaned daily or as often as weather conditions allow and that repair of damaged or missing baffles be initiated within 30 days and completed as soon as practicable. Materials needed for repair are not always available in a short time frame. Three commenters said that their experience indicates that monthly cleaning of baffles is adequate and added that additional cleaning should be performed if the upward flow of the steam plume is obstructed. These commenters also noted that it may not be possible to complete repairs to damaged baffles prior to the next scheduled monthly inspection and suggested that a requirement to initiate repairs prior to the next inspection is more appropriate.

Two commenters noted that some plants have backup quench stations that are used when the primary quench tower is unavailable because of maintenance or malfunction. These backup stations are used only a small amount of the time, and they are not designed to capture quenching emissions (i.e., they have no stacks or baffles). Both commenters requested that EPA clarify that backup quench stations are not subject to the requirements for baffles.

Response. We agree with the comment that baffles reduce PM emissions. In addition, we believe that baffles also reduce the emission of HAP metal compounds contained in

the particles of grit released, as well as semivolatile and VOC such as polycyclic aromatic hydrocarbons (PAH) and benzene, when green coke is quenched. Semivolatile organic compounds evolve from green coke and condense to form fine PM or condense on other particles during the quenching process. Consequently, baffles reduce emissions of both metal and organic HAP.

To clarify the provision for 95 percent coverage, we revised the coverage requirement to read that no more than 5 percent of the cross sectional area of the quench tower can be exposed to the sky when viewed from below. We understand there are several different designs and configurations used for baffles. However, there are many different factors that affect emissions from quench towers. For example, it is likely that the design of the quench tower affects the level of emission control and may also affect the choice of baffle type and configuration. Consequently, we do not believe it is appropriate to prescribe in the final rule the use of a particular baffle type or design and have provided the flexibility for the owner or operator to make this determination. However, all types of baffles must have adequate coverage to provide effective emission control for quench towers.

We believe requirements for daily cleaning, monthly inspection, and prompt repair of damaged baffles are reasonable and necessary to ensure that they are well

maintained. These practices are common at many coke plants, and the frequencies are based on industry responses to a nationwide survey. However, we agree that repairing baffles during inclement weather conditions is a personnel safety issue. We also agree that there may be operational problems when baffles are washed during freezing weather.

Consequently, we revised the requirement to wash baffles daily to allow daily washing to be suspended when the highest measured ambient temperature throughout the day is less than 30 degrees Fahrenheit. We understand that the time needed for repair can vary depending on the extent of repair needed and the availability of materials. Therefore, we have written the final rule to require that the repair of damaged or missing baffles be initiated within 30 days and that the repairs be completed as soon as practicable.

We gathered information on the use of backup quench stations by surveying coke plants. A total of nine coke plants among the 12 responding to the survey have 13 backup quench stations. Only one of these 13 backup quench stations is equipped with baffles, and the stations are typically used less than 5 percent of the time. Based on the information we received, we conclude that MACT for backup quench stations at existing coke oven batteries does not include the installation of baffles. We have specified in the final rule our subcategorization of backup quench stations, and we have defined this subcategory as those

quench stations that are used for less than 5 percent of quenches for any coke oven battery in any 12-month period. However, the best-controlled similar source has baffles in the backup quench station. Consequently, the requirements for installing, inspecting, cleaning, and repairing baffles applies to backup quench stations at new batteries.

In addition, the TDS limit applies to backup quench stations because the existing State limits we used to determine the MACT floor apply to quench water, whether it is used in regular quench towers or backup quench stations. There is no reason to permit the use of higher TDS levels for quenching merely because a backup quench station is used.

E. What were the major comments on the proposed standard for battery stacks?

Comment. One commenter stated that EPA has not adequately subcategorized batteries in developing the MACT for battery stacks, and that the EPA should have distinguished among short and tall batteries, pulse-fired batteries, batteries using preheated coal, batteries of older design, and foundry coke batteries that are consistently operated at longer coking times. The commenter also stated that each battery is unique with respect to the factors that affect battery stack emissions. Consequently, the O&M program required to control these emissions differs from battery to battery. The factors affecting emissions

include the age and condition of the battery's refractory, the condition of the stack canal, the battery design, sealing carbon, coal properties and coke specifications, and the design and efficiency of the by-product recovery plant.

Response. We disagree with the commenter that we have not subcategorized batteries adequately in establishing performance standards for battery stacks. Our current database shows that the proposed opacity limits have been achieved on a continuing basis by numerous batteries with a variety of physical and operational differences. We do not believe that more subcategories are needed beyond those in the proposed rule.

At proposal, we had months of COMS data demonstrating that the limits for by-product batteries had been achieved by ten of the 46 by-product batteries. After proposal, we obtained data for six additional batteries that also achieve the proposed limits. In total, we have 13 months of data for each of five batteries, 18 months of data for each of eight batteries, and 12, 50, and 65 months of data for each of three batteries. Our database now covers 35 percent of all by-product batteries, spanning all types and ages and covering all seasons of the year. Among the 16 batteries demonstrated to have achieved the proposed MACT opacity limits are short and tall batteries, furnace and foundry coke batteries, and batteries with gun flue and under jet underfiring systems. Also included are batteries that use

pulse firing, preheated coal, and underfiring gas with and without desulfurization. They range in age from 8 to 46 years.

We examined the data to determine if subcategories are needed for different battery designs as mentioned by the commenter. We could find no difference in performance levels achieved by short vs. tall batteries, under jet vs. gun flue, furnace vs. foundry coke, or the other factors mentioned by the commenter. We found a difference in performance when batteries are placed on extended coking, which reduces sealing carbon on the oven walls.

Consequently, we developed a separate emission limit for batteries on extended coking. We also acknowledge that batteries operating routinely on coking cycles that are longer than that for which they are designed could qualify as extended coking. To accommodate this, we have revised the definition for "batterywide extended coking" to mean increasing the average coking time for all ovens in a battery by 25 percent or more over the manufacturer's design rate.

Comment. One commenter stated that EPA must develop a work practice standard for battery stacks because it is not feasible to set performance standards. The commenter noted that EPA uses three approaches to determine MACT floors (emissions data, existing emission limits from State regulations or operating permits, or technology). We used

the technology approach for battery stacks. The commenter believes that the use of a technology approach for battery stacks is inappropriate because the technology is not an air pollution control device but is good O&M. The commenter further states that good O&M results in widely varying degrees of emission control. Good O&M is not a "technology" for the purposes of applying the technology approach because, unlike an add-on control device, good O&M cannot be associated with specific emission control levels at different batteries. The only way to establish a floor for battery stacks is to use actual emissions data. However, EPA does not have enough emissions data to subcategorize batteries adequately or to characterize performance over time and under the worst foreseeable operating conditions.

The commenter provided details for a suggested work practice program for battery stacks. The program would be implemented when a daily average opacity trigger is exceeded. The commenter suggests that the values EPA proposed for the emission limits (15 percent for normal coking time and 20 percent for extended coking time) be used as the triggers. The work practice program would include requirements for worker training as well as procedures for controlling oven to flue leakage, including diagnostic procedures for identifying problem ovens and a list of corrective actions.

Response. The EPA established the MACT floor for

battery stacks by identifying the level of performance consistently achieved by the best-performing units. Because units in this category currently do not use add-on control devices to reduce stack emissions, we looked at other measures employed by existing facilities in order to identify the best-performing units. Specifically, we looked at equipment, work practices, and operational factors that reduce emissions at existing facilities. We identified good systematic operation and maintenance, along with operation of COMS to monitor stack opacity, as the most important factors affecting the level of emissions from coke oven battery stacks. In fact, we determined that all of the best-performing batteries employ measures that have the same basic features, including COMS monitoring to identify problems, ongoing systematic maintenance of oven walls, and procedures for prompt and efficient repair of damaged ovens. We also identified, based on the large amount of available COMS data, the level of performance that units employing such measures are consistently achieving. Therefore, this approach identifies what is being done at existing facilities to reduce coke oven emissions from battery stacks and correlates those control activities to a specific level of performance. Because a sufficient number of units in the category are employing these control strategies and achieving the identified emissions limitation, this limit is

MACT for existing sources.² Contrary to the commenter's assertion, there is no basis to conclude that any existing battery, with appropriate repairs, monitoring and maintenance, would be unable to achieve a similar level of control. Therefore, it was reasonable here for EPA to use this approach to identify the best units and to establish emission limits based on the performance of those units.

Because the opacity data used to establish the emissions limits are, in fact, representative of what a well operated coke oven battery can achieve (with comprehensive O&M, continuous monitoring, and an efficient repair program), it is not only reasonable but required that EPA establish such a limit. Because these emissions are emitted through a stack, can be measured, and could be captured and controlled with the application of available emission control technologies, it would not be appropriate for EPA to establish a work practice standard in lieu of an emissions standard. Thus, the CAA requires us to develop an emission standard in this case because a work practice standard is allowed in lieu of an emission standard only if it is not feasible to prescribe or enforce an emission standard.

² While, in the proposal, we described this as a "technology approach" and referred to good O&M as the "MACT technology," these were merely short hand references for EPA's detailed analysis of the measures employed by best facilities to achieve the greatest degree of emissions reductions. In fact, the emission limit for battery stacks is based on the level of performance that the best existing sources consistently achieve, as demonstrated by actual emission test data (in the form of COMS readings).

The primary factor affecting battery stack emissions is the condition of oven walls. Batteries that are well maintained can achieve the MACT limits. When the walls are allowed to deteriorate and cracks occur, coke oven emissions escape through the cracks into the underfiring system and lead to high stack opacity. Another important factor in meeting the proposed limit is using COMS for diagnostic purposes. When an opacity spike occurs, the last oven charged can be identified and corrective actions can be made to repair the oven. High stack opacity may on occasion be caused by combustion problems, which also result in HAP emissions. However, these are easily remedied by proper adjustment and operation of the underfiring system.

We identified batteries with good O&M practices, and we collected opacity data from their COMS to characterize the level of control they have achieved. As discussed earlier, these batteries are representative of the types currently operating, and aside from the effect of extended coking, we found no basis to develop additional subcategories. The opacity limits identified as MACT have been achieved by these different types of batteries by using good O&M procedures. The performance level associated with the floor has been demonstrated as achievable and is representative of the performance of the top performing sources.

We agree that a good work practice program is essential to maintain control of battery stack emissions and that we

derived the emission limits based on the best-controlled batteries which have such programs. However, a work practice standard alone would not ensure that battery stacks are well maintained on a continuing basis. In contrast, a performance standard will ensure that battery stack emissions are well controlled and allows plant owners or operators the flexibility to implement a site-specific program appropriate for their operation. In addition, we are obligated under the CAA to set numerical emission limitations unless it is infeasible, and we must prescribe requirements for continuous monitoring whenever possible. Moreover, we have battery stack emissions data for 16 batteries that cover many months of operation.

Comment. Two commenters claimed that EPA arbitrarily and improperly excluded critical COMS data. Specifically, 3 years of data were excluded for Battery 1 at Bethlehem Steel, Burns Harbor, and all of the data for U.S. Steel Gary Works were excluded. The commenter said that EPA excluded the Burns Harbor data because end flue repairs were suspended in 1994, but noted that twice as many end flue repairs were made in 1993 and after 1994 than in previous years. The commenter said that EPA excluded the Gary Works data because they do not represent periods of good systematic O&M. The commenter further stated that the data for two tall batteries at Gary Works should be included because they represent the battery's performance prior to a

\$150 million program of end flue and through wall repair. There is no basis for excluding these data, and EPA must account for all operating periods (other than startups, shutdowns, and malfunctions) to accurately reflect a source's performance under the most adverse operating conditions over time. The commenter provided details on periods of startup, shut down, and malfunction events that occurred during 31 days of the 2 years of data for Gary Works. The commenter concluded that EPA must include all of the data for Battery 1 at Burns Harbor and the data for Gary Works (except for the 31 days they identified) in the MACT floor analysis. Another commenter asked that all of the data supplied for Battery 1 at Burns Harbor be included in the analysis because it represents consistent operating practices over the period.

Response. We strongly disagree that our exclusion of certain COMS data was inappropriate. The data that we did not use were not generated at a facility while it was implementing an effective O&M program. We explained that the data for Battery 1 at Burns Harbor collected in the early 1990's do not represent proper MACT level O&M because repairs were decreased to maintain production while adjacent Battery 2 was being rebuilt. The data clearly show that abandoning repairs increased opacity, which averaged 8.1 percent prior to 1996 and 4.8 percent afterwards. It is also apparent that the earlier data show high opacity spikes

(daily averages of 35 to 40 percent) that are indicative of damaged oven walls and clearly show that good O&M practices were not in place. By definition, good O&M means that the opacity spikes identified by the COMS would have been investigated, problems diagnosed, and repairs made. When repairs were resumed and better O&M procedures were followed, the daily average opacity was consistently maintained below 15 percent for subsequent months. We have 50 consecutive months of data for Battery 1 showing that it achieves the MACT emission limit on a continuing basis. In addition, these are the most recent data which indicate that the battery has improved with age rather than deteriorated with age. It is obvious that the measures taken in the early 1990s to maintain oven walls were not the same as those taken in subsequent years, and this has been confirmed by company data that show no end flue repairs in 1994.

A similar situation exists at U.S. Steel Gary Works. We obtained documentation from the company that shows that batteries were not employing good O&M during high opacity events. Equipment malfunction or untimely repair was the cause of most exceedances during that time period. However, subsequent events confirm that oven repairs and good systematic O&M resulted in batteries achieving the emission limit. After a \$150 million program of end flue and through wall repairs, the four batteries at Gary Works have improved performance significantly and can meet the battery stack

limit. We have COMS data for 13 recent months that show the four batteries have achieved the MACT level of control. Moreover, these batteries also show improved performance rather than deterioration as they age.

Comment. One commenter stated that EPA's emission estimates for battery stacks are based on a flawed correlation between opacity and HAP. The commenter said that no correlation exists because high opacity can be caused by situations that do not indicate the presence of HAP, such as poor or incomplete combustion and the presence of sulfates. The commenter noted that the data from two EPA tests (ABC Coke and Bethlehem Steel, Burns Harbor) show no correlation between opacity and PAH, extractable organics, or metal HAP. The commenter concluded that EPA has not met its burden of demonstrating that opacity is a reasonable surrogate for HAP emissions.

Response. It is well established that opacity is directly correlated with the concentration of particles in emissions. Our tests have shown that the particles emitted during coke oven pushing contain HAP compounds, including POM and metals. Higher opacities mean a higher concentration of particles and therefore higher concentrations of HAP. The correlation of opacity and HAP is also supported by the common industry practice of using COMS to detect leaks in oven walls. Coke oven gas escapes from ovens with cracked or damaged walls and results in

increased battery stack opacity. These coke oven emissions that are detected with the COMS are a listed HAP.

The two batteries that we tested had very low opacities (2 to 5 percent), and it is not possible to develop a clear correlation over such a narrow range. The emissions from these well-controlled batteries are not representative of batteries that have high opacity emissions from their battery stacks.

Infrequently, higher opacity occurs because of combustion problems which result in the formation of products of incomplete combustion that also contain HAP. For example, such emissions contain a variety of PAH such as benzo(a)pyrene. All the available data related to poor performing batteries, including the available emissions data and the historical use of COMS to detect coke oven emissions, indicate that coke oven emissions can be appropriately identified by looking at opacity. Therefore, limiting opacity is an appropriate mechanism for limiting such emissions from coke oven battery stacks.

Comment. Two commenters stated that COMS should be used for diagnostic purposes only and not as an enforcement tool. One commenter cited an industry survey that identified 26 COMS used on 27 batteries and stated that they are used as a diagnostic tool. Most of these COMS are no longer commercially available and cannot meet EPA's PS 1 requirements. Consequently, it is inappropriate to use data

generated by these COMS to set standards or to demonstrate compliance with an opacity limit. Another commenter also stated that the COMS do not meet PS 1 requirements and added that EPA should not base emission limits on data that were collected by methods less stringent than those that will be used to determine compliance. One commenter noted that there are demonstrated inaccuracies that make COMS unreliable at opacity levels below 10 percent. This is important because battery stack opacity is below 5 percent most of the time at virtually all batteries, so a large number of unreliable data points would be averaged with fewer reliable data points to calculate the daily average opacity. Another commenter stated that COMS readings are inaccurate and that only opacity data generated by Method 9 observations should be used to determine compliance.

Response. We proposed a performance standard for battery stacks in the form of an opacity limit. The COMS have been well established as the preferred method to show continuous compliance with an opacity limit. The data we collected from the U.S. Steel batteries at Clairton and the more recent data from the new COMS installed at U.S. Steel Gary Works were from devices that meet PS 1 requirements.

Moreover, while we agree that COMS are subject to greater imprecision at low opacity, this imprecision is inherent in the data we used to develop the opacity limits; therefore, these limits already account for this

imprecision. Additionally, the limits have been shown to be achievable by numerous batteries over time. Consequently, we believe that COMS are an appropriate tool for enforcement of the standard that was based on data collected by COMS.

We do agree with the commenter that COMS should also be used for diagnostic purposes. A COMS is an important part of good systematic O&M that we identified as the MACT floor technology. The COMS will provide information on problem ovens in need of repair, and diagnostic procedures coupled with corrective action will provide good control of HAP emissions from battery stacks.

We do not believe observations by Method 9 should be used to determine compliance. A COMS provides data in a more timely manner, monitors emissions continuously, and is the only reasonable way to collect enough data to determine a daily average opacity.

F. What changes did we make to the requirements for soaking?

Comment. Several commenters requested that we remove the soaking work practice and recordkeeping requirements from the final rule. They claim that soaking emissions cannot be considered as part of the rule because they were addressed in the 1993 negotiated coke ovens: charging, topside, and door leaks NESHAP (40 CFR part 63, subpart L), which addressed charging emissions and emissions from leaking topside port lids, offtake systems, and doors. The

commenters state that the 1993 coke ovens: charging, topside, and door leaks NESHAP allow up to three ovens to be dampered off the main and not counted when determining daily compliance with the offtake system(s) standard, and as a result, are specifically addressed in the previous negotiated coke ovens: charging, topside, and door leaks NESHAP. Two commenters expressed support for the proposed soaking standards.

Response. Soaking emissions were not specifically addressed in the regulatory negotiations for the coke ovens: charging, topside, and door leaks NESHAP. The emissions points that were negotiated include charging, topside port lid leaks, offtake system(s) leaks, door leaks, and bypass or bleeder stacks. For offtake systems, the coke ovens: charging, topside, and door leaks NESHAP limit the percent allowed to leak during the coking cycle. The only discussion regarding soaking is a clarification in the test method about whether open standpipes on ovens dampered off the main would be counted as offtake leaks. There was no discussion of the voluminous emissions that can occur when the standpipes are opened on an oven containing green coke and the emissions do not ignite. We believe soaking emissions are part of the pushing operation because they occur when the oven is taken off the collecting main in preparation for pushing. These emissions should be addressed by the MACT standards because they have not been

addressed previously by EPA, they are a source of coke oven emissions (a listed HAP), and reasonable control measures are available to reduce emissions.

Comment. Two commenters requested an alternative work practice requirement for soaking emissions instead of the proposed requirement that the emissions be ignited. Because soaking emissions are often not readily ignitable, several commenters noted the potential danger involved in the proposed requirement to ignite open standpipes since the flame is often invisible and igniting the emissions could cause serious injury if the person igniting the flame doesn't see it or is standing downwind from the standpipe.

Several commenters stated that the proposed requirement carries an enormous administrative burden associated with the tracking, recording, and documenting the lighting off of standpipes. One commenter said that any benefits associated with the proposed soaking requirements are far outweighed by the administrative costs.

Response. After the close of the comment period, we visited several coke plants specifically to observe and discuss soaking emissions. We determined visible emissions from soaking stem from two causes: leaks from the collecting main (i.e., the standpipe is not completely sealed from the main) and incomplete coking ("green" coke). The cause of emissions can be determined by introducing a small amount of aspirating steam/liquor into the standpipe.

If this stops the emissions, the cause of emissions is a leak from the collecting main. Corrective actions from collecting main leaks include reseating the damper dish, cleaning the flushing liquor distribution piping, or leaving the aspirating steam or liquor cracked on. If introducing aspirating steam/liquor does not stop the emissions, the cause is incomplete coking. Further investigation (for example, by opening charging lids and observing the coke mass) will determine if the entire charge or only a small portion is undercoked. Emissions from incomplete coking (e.g., from a cold spot) can be ignited by partially or fully removing the oven lid nearest the standpipe, cracking open and then closing an adjacent standpipe cap, partially opening the opposite aspirating steam valve for a short time on a dual main battery, or manually igniting emissions.

In light of our increased understanding of soaking emissions and their causes and remedies, we have replaced the proposed requirements for soaking with a more comprehensive work practice requirement. If there are visible emissions from a standpipe during soaking, plant personnel must immediately investigate the cause and take corrective action. Work practices are triggered by visible emissions from standpipes that do not ignite automatically. These work practices include eliminating soaking emissions that result from leaks from the collecting main and either igniting the emissions or continuing coking if they are

caused by incomplete coking.

We understand that there are times when igniting standpipes can be dangerous. If flames are invisible (i.e., there are no visible emissions from the standpipe), there is no need to attempt ignition. If there are visible emissions that do not automatically ignite, several things can be done to encourage self-ignition, such as partially or fully removing the oven lid nearest the standpipe, cracking open and then closing an adjacent standpipe cap, or partially opening the opposite aspirating steam valve for a short time on a dual main battery. We know of at least one plant with three batteries that require their workers to manually ignite emissions when they do not ignite automatically. Devices are available to ignite these emissions safely and at a reasonable distance from the open standpipe. The work practice standard requires owners or operators to train workers in the procedures to reduce soaking emissions, and each plant should address all aspects of safety. We do not believe that the revised standard jeopardizes the safety of plant workers.

We agree with the commenters that the proposed standard would have imposed unnecessary administrative burdens related to soaking emissions. Accordingly, we have eliminated the requirement to document the ignition of soaking emissions every time an oven is dampered off the main. Instead, plant owners or operators must prepare and

operate at all times according to a written work practice plan for soaking.

G. What changes did we make to the O&M requirements?

Comment. Several commenters suggested changes to the general batterywide O&M plan. One comment was to delete the requirement to measure or compute the air:fuel ratio. They noted that the air:fuel ratio is not normally measured, and it would be impractical to do so given that it would require flow measurements of every oven's air box and gas orifice to calculate the air:fuel ratio. Another commenter asked that the requirement for procedures to prevent pushing an oven out of sequence be deleted. The commenter argued that any oven placed on extended coking would of necessity be pushed out of sequence. Another comment was to delete the requirement for procedures to prevent undercharging an oven because it has no effect on emissions. In addition, procedures for measuring the volume of coal are not appropriate because many plants calculate coal volume rather than measure it.

Response. We agree that it may be impractical to measure air:fuel ratio since it is a calculated value at most plants. Different parameters may be monitored at different plants to ensure the underfiring system is operating properly. Consequently, we have written the final rule to require that the O&M plan include the frequency and method of recording underfiring gas parameters. We are also

clarifying the pushing an oven out of sequence requirement. Our intent is to prevent an oven from being pushed ahead of schedule before it is fully coked. We have added language to the final rule that clarifies this intent. Relative to undercharging an oven, we disagree with the commenter that undercharging does not produce emissions. Our research and discussions with coke plant operators indicate that undercharging an oven can produce excess carbon on oven walls, which can result in pushing difficulties and excess pushing emissions. Consequently, we are retaining the requirements for procedures to prevent both undercharging and overcharging ovens in the work plan. We understand that not all plant owners or operators measure the volume of coal; some calculate the volume from weight and bulk density. We have written the language in the final rule to require procedures for determining coal volume rather than the measurement of coal volume.

H. Why did we change the compliance dates for existing sources?

Comment. Several commenters said 3 years should be allowed to achieve compliance. They note that we provided no rationale for providing for only 2 years to comply and should give the full 3 years allowed under the CAA. Two years may not provide enough time because of the substantial work that must be done at many plants, and it may be difficult to raise the necessary capital to make the

batteries compliant.

Response. The CAA requires that compliance occur as expeditiously as practicable, but no later than 3 years after the effective date of the standard. (See CAA section 112(i)(3).) We agree with the commenters that many batteries will require extensive repairs in order to comply with the final rule. As a result, we have written the final rule to provide the 3 years allowed under the CAA. We estimate that 23 batteries will need major repairs (oven patching, endflues, and through walls) with capital costs of \$2.4 million to \$9.3 million per battery. In light of the cost and time required to complete necessary repairs at many facilities, we believe that a period of 3 years is necessary in order to allow sufficient time for all existing facilities to meet the requirements of today's final rule.

IV. Summary of Environmental, Energy, and Economic Impacts

A. What are the air emission reduction impacts?

Accurate emission estimates are difficult to make, especially for fugitive pushing emissions. When green pushes occur, most of the organic HAP escape the capture system and are unmeasurable. Our estimate for pushing emissions is based on our best estimates of the capture efficiency and frequency of green pushes. For battery stacks, we have opacity and emissions data for the best-controlled batteries. We had to extrapolate the test data to account for higher emissions from batteries with higher

battery stack opacities.

At proposal, we estimated that coke oven emissions, measured as methylene chloride extractable organic compounds from pushing, quenching, and battery stacks, would be reduced to approximately 500 tpy from a baseline level of about 1,000 tpy. However, six coke plants have permanently closed since proposal. Our current best estimate is that baseline emissions of 680 tpy will be reduced to 390 tpy. The final rule will also significantly reduce emissions of other HAP, such as metals, benzene, toluene, and other volatile compounds that are not included with the extractable organics. However, we do not have a reliable means of estimating the overall reductions of these other HAP emissions. Today's final rule will also reduce emissions of PM.

B. What are the cost impacts?

As with the emission estimates, there is some uncertainty in the cost estimates. However, we obtained data from the best-controlled plants for their emission controls, oven repairs, and work practices. After proposal, we collected additional information on the extent of repairs needed and their costs. We then applied these costs to those batteries that we project would be impacted by the rule and developed revised cost estimates. We estimate that 23 batteries may require major repairs and could incur aggregate capital costs of \$2.4 to \$9.3 million to rebuild

ovens to meet the final standards for pushing and battery stacks. Relative to add-on air pollution controls, we believe that three batteries will have to install baffles in their quench towers to control quenching emissions. We do not believe that any plant will need to upgrade or install new control devices to meet the final PECD standard.

Monitoring is also an important component of MACT and the cost estimate. Approximately 20 batteries will need to install COMS on their battery stacks. In addition, 44 batteries are expected to incur the cost of visible emissions observers for daily observation of pushing emissions, and 18 bag leak detection systems must be installed. The cost of control and monitoring associated with the above measures is expected to result in nationwide capital costs of about \$90 million and total annualized cost of \$20 million per year.

C. What are the economic impacts?

We conducted a detailed assessment of the economic impacts associated with the final rule. We expect the compliance costs associated with the final rule to increase the price of coke, steel mill products, and iron castings and to reduce their domestic production and consumption. We project the market price of furnace coke to increase by almost 3 percent, while the market price for foundry coke should remain unchanged. We expect domestic production of furnace coke to decline by 348,000 tons, or 3.9 percent.

For foundry coke, we expect domestic production to remain unchanged.

In terms of industry impacts, we project the integrated steel producers to experience a slight decrease in operating profits, which reflects increased costs of furnace coke inputs and associated reductions in revenues from producing their final products. Our analysis indicates that one of the captive batteries may stop supplying furnace coke to the open market but will continue to satisfy internal coke requirements for integrated steel production. Through the market impacts described above, the final rule will produce impacts within the merchant segment. We project merchant plants producing furnace coke as a whole to experience profit increases in response to the final rule. We also project other merchant plants producing foundry coke and some integrated steel plants to lose profits. Furthermore, the economic impact analysis indicates that two of the 13 merchant batteries producing furnace coke are at risk of closure, while none of the foundry coke producing batteries are at risk of closure. For more information, consult the economic impact analysis supporting the final rule.

D. What are the non-air environmental and energy impacts?

The technology associated with MACT relies primarily on pollution prevention techniques in the form of work practices and diagnostic procedures to prevent green pushes and leakage through oven walls. Consequently, there are no

significant non-air environmental and energy impacts.

V. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the EPA must determine whether the regulatory action is "significant" and, therefore, subject to review by the Office of Management and Budget (OMB) and the requirements of the Executive Order. The Executive Order defines a "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) materially alter the budgetary impact of entitlement, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, it has been determined that this final rule is a "significant regulatory action" because it may raise novel legal or

policy issues. As such, this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

B. Paperwork Reduction Act

The information collection requirements in the final rule have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. An information collection request (ICR) document has been prepared by EPA (ICR No. 1995.02), and a copy may be obtained from Susan Auby by mail at U.S. EPA, Office of Environmental Information, Collection Strategies Division (2822T), 1200 Pennsylvania Avenue, Washington, DC 20460, by e-mail at auby.susan@epa.gov, or by calling (202) 566-1672. A copy may also be downloaded off the Internet at <http://www.epa.gov/icr>. The information requirements are not enforceable until OMB approves them.

The information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A), which are mandatory for all operators subject to NESHAP. These recordkeeping and reporting requirements are specifically authorized by section 112 of the CAA (42 U.S.C. 7414). All information submitted to the EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to Agency policies in 40 CFR part 2, subpart B.

The final rule requires maintenance inspections of control devices, two types of written plans (in addition to the startup, shutdown, and malfunction plan required by the NESHAP General Provisions), and a special study of flue temperatures for by-product coke oven batteries with horizontal flues (with notification of the date the study is to be initiated). Quarterly reports of any deviations from the applicable limits for battery stacks are required, with semiannual reports for other affected sources. The recordkeeping requirements require only the specific information needed to determine compliance.

The annual public reporting and recordkeeping burden for this collection of information (averaged over the first 3 years after [INSERT DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER] is estimated to total 2,200 labor hours per year at a total annual cost of \$131,000. This estimate includes one-time performance tests and reports, preparation and submission of O&M plans, and a special study of flue temperatures; one-time purchase and installation of continuous monitoring systems; one-time preparation of a standard operating procedures manual for baghouses; one-time preparation of a startup, shutdown, and malfunction plan, notifications, and recordkeeping. Total capital/startup costs associated with the monitoring requirements over the 3-year period of the ICR is estimated at \$32,000 per year, with operation and maintenance costs of \$51,000 per year.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purpose of collecting, validating, and verifying information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to respond to a collection of information; search existing data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An Agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control number for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

C. Regulatory Flexibility Act

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with the final rule. The EPA has also determined that the final rule will not have a significant economic impact on a substantial number of small entities. For purposes of assessing the impact of today's final rule on small entities, small entity is defined as: (1) a small business according to the U.S. Small Business Administration size

standards for NAICS codes 331111 and 324199 ranging from 500 to 1,000 employees; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, EPA has concluded that this action will not have a significant economic impact on a substantial number of small entities. We have determined that three of the 14 companies within this source category are small businesses. Small businesses represent 21 percent of the companies within the source category and are expected to incur 19 percent of the total industry compliance costs of \$20.2 million. The average total annual compliance cost is projected to be \$1.3 million per small company, while the average for large companies is projected to be \$1.5 million per company. Under the final rule, the mean annual compliance cost, as a share of sales, for small businesses is 2 percent, and the median is 1.8 percent, with a range of 0.3 to 5 percent. We estimate that two of the three small businesses may experience an impact greater than 1 percent of sales, and one small businesses will experience an impact greater than 3 percent of sales.

We performed an economic impact analysis to estimate

the changes in product price and production quantities for the firms affected by the final rule. Although this industry is characterized by average profit margins of close to 4 percent, our analysis indicates that none of the coke manufacturing plants owned by small businesses are at risk of closure because of today's final rule. In fact, the one plant manufacturing furnace coke is projected to experience an increase in profits because of market feedbacks related to higher costs incurred by competitors, while the plants manufacturing foundry coke are projected to experience a decline in profits of slightly less than 5 percent.

In summary, the economic impact analysis supports our conclusion that a regulatory flexibility analysis is not necessary because, while a few small firms may experience initial impacts greater than 1 percent of sales, no significant impacts on their viability to continue operations and remain profitable are indicated. See Docket OAR-2002-0085 for more information on the economic analysis.

Although the final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of the final rule on small entities. We have made site visits to these plants and discussed potential impacts and opportunities for emissions reductions with company representatives. Company representatives have also attended meetings held with industry trade associations to discuss the rule development,

and we have included provisions in the final rule that address their concerns.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, the EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100 million or more in any 1 year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires the EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least-burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows the EPA to adopt an alternative other than the least-costly, most cost-effective, or least-burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before the EPA establishes any regulatory requirements that may

significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Today's final rule contains no Federal mandate (under the regulatory provisions of the UMRA) for State, local, or tribal governments. The EPA has determined that the final rule does not contain a Federal mandate that may result in estimated costs of \$100 million or more for State, local, and tribal governments, in the aggregate, or to the private sector in any 1 year. Thus, the final rule is not subject to the requirements of sections 202 and 205 of the UMRA. The EPA has also determined that the final rule contains no regulatory requirements that might significantly or uniquely affect small governments. Thus, today's final rule is not subject to the requirements of section 203 of the UMRA.

E. Executive Order 13132: Federalism

Executive Order 13132 (64 FR 43255, August 10, 1999) requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in

the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

The final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. None of the affected facilities are owned or operated by State governments. Thus, Executive Order 13132 does not apply to the final rule.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

Executive Order 13175 (65 FR 67249, November 9, 2000) requires EPA to develop and accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications."

The final rule does not have tribal implications, as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian

tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes. No tribal governments own or operate coke oven batteries. Thus, Executive Order 13175 does not apply to the final rule.

G. Executive Order 13045: Protection of Children from Environmental Health & Safety Risks

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that: (1) is determined to be "economically significant," as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the EPA must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5-501 of the Executive Order has the potential to influence the regulation. The final rule is not subject to Executive Order 13045 because it is based on control technology and not health or safety risks.

H. Executive Order 13211: Actions that Significantly Affect Energy Supply, Distribution, or Use

This final rule is not a "significant energy action" as defined in Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Further, we have concluded that the final rule is not likely to have any adverse energy effects.

I. National Technology Transfer Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Public Law 104-113; 15 U.S.C 272 note) directs EPA to use voluntary consensus standards in their regulatory and procurement activities unless to do so would be inconsistent with applicable law or otherwise impracticable. Voluntary consensus standards are technical standards (such as material specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus standard bodies. The NTTAA directs EPA to provide Congress, through annual reports to OMB, with explanations when an agency does not use available and applicable voluntary consensus standards.

The final rule involves technical standards. The final rule requires plants to use EPA Methods 1, 2, 2F, 2G, 3, 3A, 3B, 4, 5, 5D, and 9 in 40 CFR part 60, appendix A, and PS 1 in 40 CFR part 60, appendix B. Consistent with the NTTAA, we conducted searches to identify voluntary consensus standards in addition to these EPA methods.

One voluntary consensus standard was identified as applicable to PS 1. The standard, ASTM D6216 (1998), Standard Practice for Opacity Monitor Manufacturers to Certify Conformance with Design and Performance Specifications, has been incorporated by reference into PS 1 (65 FR 48920, August 10, 2000).

Our search for emissions monitoring procedures identified 16 other voluntary consensus standards. We determined that 13 of these standards identified for measuring emissions of HAP or surrogates would not be practical due to lack of equivalency, detail, or quality assurance/quality control requirements. The three remaining consensus standards identified in the search are under development or under EPA review. Therefore, the final rule does not require these voluntary consensus standards. See Docket OAR-2002-0085 for more detailed information on the search and review results.

Section 63.7322 of the final rule lists the EPA test methods that coke plants are required to use when conducting a performance test. Most of these methods have been used by States and the industry for more than 10 years. Nevertheless, 40 CFR 63.7(e) and (f) allow any State or source to apply to EPA for permission to use an alternative method in place of any of the EPA test methods or performance specifications required by a rule.

J. Congressional Review Act

**NESHAP for Coke Ovens: Pushing, Quenching, and Battery
Stacks- page 91 of 171**

The Congressional Review Act, 5.U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing the final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the final rule in the Federal Register. The final rule is not a "major rule" as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control,
Hazardous substances, Reporting and recordkeeping
requirements.

Dated:

Christine Todd Whitman,
Administrator.

For the reasons stated in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is amended as follows:

PART 63 - [AMENDED]

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401, et seq.

2. Part 63 is amended by adding subpart CCCCC to read as follows:

Subpart CCCCC--National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks

Sec.

What this Subpart Covers

- 63.7280 What is the purpose of this subpart?
- 63.7281 Am I subject to this subpart?
- 63.7282 What parts of my plant does this subpart cover?
- 63.7283 When do I have to comply with this subpart?

Emission Limitations and Work Practice Standards

- 63.7290 What emission limitations must I meet for capture systems and control devices applied to pushing emissions?
- 63.7291 What work practice standards must I meet for fugitive pushing emissions if I have a by-product coke oven battery with vertical flues?
- 63.7292 What work practice standards must I meet for fugitive pushing emissions if I have a by-product coke oven battery with horizontal flues?
- 63.7293 What work practice standards must I meet for fugitive pushing emissions if I have a non-recovery coke oven battery?
- 63.7294 What work practice standard must I meet for soaking?
- 63.7295 What requirements must I meet for quenching?
- 63.7296 What emission limitations must I meet for battery stacks?

Operation and Maintenance Requirements

- 63.7300 What are my operation and maintenance requirements?

General Compliance Requirements

- 63.7310 What are my general requirements for complying with this subpart?

Initial Compliance Requirements

- 63.7320 By what date must I conduct performance tests or other initial compliance demonstrations?
- 63.7321 When must I conduct subsequent performance tests?
- 63.7322 What test methods and other procedures must I use to demonstrate initial compliance with the emission limits for particulate matter?
- 63.7323 What procedures must I use to establish operating limits?
- 63.7324 What procedures must I use to demonstrate initial compliance with the opacity limits?
- 63.7325 What test methods and other procedures must I use to demonstrate initial compliance with the TDS or constituent limits for quench water?
- 63.7326 How do I demonstrate initial compliance with the emission limitations that apply to me?
- 63.7327 How do I demonstrate initial compliance with the work practice standards that apply to me?
- 63.7328 How do I demonstrate initial compliance with the operation and maintenance requirements that apply to me?

Continuous Compliance Requirements

- 63.7330 What are my monitoring requirements?
- 63.7331 What are the installation, operation, and maintenance requirements for my monitors?
- 63.7332 How do I monitor and collect data to demonstrate continuous compliance?
- 63.7333 How do I demonstrate continuous compliance with the emission limitations that apply to me?
- 63.7334 How do I demonstrate continuous compliance with the work practice standards that apply to me?
- 63.7335 How do I demonstrate continuous compliance with the operation and maintenance requirements that apply to me?
- 63.7336 What other requirements must I meet to demonstrate continuous compliance?

Notifications, Reports, and Records

- 63.7340 What notifications must I submit and when?
- 63.7341 What reports must I submit and when?
- 63.7342 What records must I keep?
- 63.7343 In what form and how long must I keep my records?

Other Requirements and Information

- 63.7350 What parts of the General Provisions apply to me?
63.7351 Who implements and enforces this subpart?
63.7352 What definitions apply to this subpart?

Tables to Subpart CCCCC of Part 63

Table 1 to Subpart CCCCC of Part 63 - Applicability of General Provisions to Subpart CCCCC

What this Subpart Covers

§63.7280 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for pushing, soaking, quenching, and battery stacks at coke oven batteries. This subpart also establishes requirements to demonstrate initial and continuous compliance with all applicable emission limitations, work practice standards, and operation and maintenance requirements in this subpart.

§63.7281 Am I subject to this subpart?

You are subject to this subpart if you own or operate a coke oven battery at a coke plant that is (or is part of) a major source of hazardous air pollutant (HAP) emissions. A major source of HAP is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year.

§63.7282 What parts of my plant does this subpart cover?

(a) This subpart applies to each new or existing affected source at your coke plant. The affected source is each coke oven battery.

(b) This subpart covers emissions from pushing,

soaking, quenching, and battery stacks from each affected source.

(c) An affected source at your coke plant is existing if you commenced construction or reconstruction of the affected source before July 3, 2001.

(d) An affected source at your coke plant is new if you commenced construction or reconstruction of the affected source on or after July 3, 2001. An affected source is reconstructed if it meets the definition of "reconstruction" in §63.2.

§63.7283 When do I have to comply with this subpart?

(a) If you have an existing affected source, you must comply with each emission limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you no later than [INSERT DATE 3 YEARS FROM THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

(b) If you have a new affected source and its initial startup date is on or before [INSERT DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER], you must comply with each emission limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you by [INSERT DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

(c) If you have a new affected source and its initial startup date is after [INSERT DATE OF PUBLICATION OF THE

FINAL RULE IN THE FEDERAL REGISTER], you must comply with each emission limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you upon initial startup.

(d) You must meet the notification and schedule requirements in §63.7340. Several of these notifications must be submitted before the compliance date for your affected source.

Emission Limitations and Work Practice Standards

§63.7290 What emission limitations must I meet for capture systems and control devices applied to pushing emissions?

(a) You must not discharge to the atmosphere emissions of particulate matter from a control device applied to pushing emissions from a new or existing coke oven battery that exceed the applicable limit in paragraphs (a)(1) through (4) of this section:

(1) 0.01 grain per dry standard cubic foot (gr/dscf) if a cokeside shed is used to capture emissions;

(2) 0.02 pound per ton (lb/ton) of coke if a moveable hood vented to a stationary control device is used to capture emissions;

(3) If a mobile scrubber car that does not capture emissions during travel is used:

(i) 0.03 lb/ton of coke for a control device applied to pushing emissions from a short battery, or

(ii) 0.01 lb/ton of coke for a control device applied

to pushing emissions from a tall battery; and

(4) 0.04 lb/ton of coke if a mobile scrubber car that captures emissions during travel is used.

(b) You must meet each operating limit in paragraphs (b)(1) through (3) of this section that applies to you for a new or existing coke oven battery.

(1) For each venturi scrubber applied to pushing emissions, you must maintain the daily average pressure drop and scrubber water flow rate at or above the minimum levels established during the initial performance test.

(2) For each hot water scrubber applied to pushing emissions, you must maintain the daily average water pressure and water temperature at or above the minimum levels established during the initial performance test.

(3) For each capture system applied to pushing emissions, you must:

(i) Maintain the daily average fan motor amperes at or above the minimum level established during the initial performance test; or

(ii) Maintain the daily average volumetric flow rate at the inlet of the control device at or above the minimum level established during the initial performance test.

§63.7291 What work practice standards must I meet for fugitive pushing emissions if I have a by-product coke oven battery with vertical flues?

(a) You must meet each requirement in paragraphs

(a)(1) through (7) of this section for each new or existing by-product coke oven battery with vertical flues.

(1) Observe and record the opacity of fugitive pushing emissions from each oven at least once every 90 days. If an oven cannot be observed during a 90-day period due to circumstances that were not reasonably avoidable, you must observe the opacity of the first push of that oven following the close of the 90-day period that is capable of being observed in accordance with the procedures in §63.7334(a), and you must document why the oven was not observed within a 90-day period. All opacity observations of fugitive pushing emissions for batteries with vertical flues must be made using the procedures in §63.7334(a).

(2) If two or more batteries are served by the same pushing equipment and total no more than 90 ovens, the batteries as a unit can be considered a single battery.

(3) Observe and record the opacity of fugitive pushing emissions for at least four consecutive pushes per battery each day. Exclude any push during which the observer's view is obstructed or obscured by interferences and observe the next available push to complete the set of four pushes. If necessary due to circumstances that were not reasonably avoidable, you may observe fewer than four consecutive pushes in a day; however, you must observe and record as many consecutive pushes as possible and document why four consecutive pushes could not be observed. You may observe

and record one or more non-consecutive pushes in addition to any consecutive pushes observed in a day.

(4) Do not alter the pushing schedule to change the sequence of consecutive pushes to be observed on any day. Keep records indicating the legitimate operational reason for any change in your pushing schedule which results in a change in the sequence of consecutive pushes observed on any day.

(5) If the average opacity for any individual push exceeds 30 percent opacity for any short battery or 35 percent opacity for any tall battery, you must take corrective action and/or increase coking time for that oven. You must complete corrective action or increase coking time within either 10 calendar days or the number of days determined using Equation 1 of this section, whichever is greater:

$$X = 0.55 * Y \quad (\text{Eq. 1})$$

Where:

X = Number of calendar days allowed to complete corrective action or increase coking time; and
Y = Current coking time for the oven, hours.

For the purpose of determining the number of calendar days allowed under Equation 1 of this section, day one is the first day following the day you observed an opacity in excess of 30 percent for any short battery or 35 percent for any tall battery. Any fraction produced by Equation 1 of this section must be counted as a whole day. Days during which the oven is removed from service are not included in

the number of days allowed to complete corrective action.

(6)(i) You must demonstrate that the corrective action and/or increased coking time was successful. After a period of time no longer than the number of days allowed in paragraph (a)(5) of this section, observe and record the opacity of the first two pushes for the oven capable of being observed using the procedures in §63.7334(a). The corrective action and/or increased coking time was successful if the average opacity for each of the two pushes is 30 percent or less for a short battery or 35 percent or less for a tall battery. If the corrective action and/or increased coking time was successful, you may return the oven to the 90-day reading rotation described in paragraph (a)(1) of this section. If the average opacity of either push exceeds 30 percent for a short battery or 35 percent for a tall battery, the corrective action and/or increased coking time was unsuccessful, and you must complete additional corrective action and/or increase coking time for that oven within the number of days allowed in paragraph (a)(5) of this section.

(ii) After implementing any additional corrective action and/or increased coking time required under paragraph (a)(6)(i) or (a)(7)(ii) of this section, you must demonstrate that corrective action and/or increased coking time was successful. After a period of time no longer than the number of days allowed in paragraph (a)(5) of this

section, you must observe and record the opacity of the first two pushes for the oven capable of being observed using the procedures in §63.7334(a). The corrective action and/or increased coking time was successful if the average opacity for each of the two pushes is 30 percent or less for a short battery or 35 percent or less for a tall battery. If the corrective action and/or increased coking time was successful, you may return the oven to the 90-day reading rotation described in paragraph (a)(1) of this section. If the average opacity of either push exceeds 30 percent for a short battery or 35 percent for a tall battery, the corrective action and/or increased coking time was unsuccessful, and you must follow the procedures in paragraph (a)(6)(iii) of this section.

(iii) If the corrective action and/or increased coking time was unsuccessful as described in paragraph (a)(6)(ii) of this section, you must repeat the procedures in paragraph (a)(6)(ii) of this section until the corrective action and/or increased coking time is successful. You must report to the permitting authority as a deviation each unsuccessful attempt at corrective action and/or increased coking time under paragraph (a)(6)(ii) of this section.

(7)(i) If at any time you place an oven on increased coking time as a result of fugitive pushing emissions that exceed 30 percent for a short battery or 35 percent for a tall battery, you must keep the oven on the increased coking

time until the oven qualifies for decreased coking time using the procedures in paragraph (a)(7)(ii) or (a)(7)(iii) of this section.

(ii) To qualify for a decreased coking time for an oven placed on increased coking time in accordance with paragraph (a)(5) or (6) of this section, you must operate the oven on the decreased coking time. After no more than two coking cycles on the decreased coking time, you must observe and record the opacity of the first two pushes that are capable of being observed using the procedures in §63.7334(a). If the average opacity for each of the two pushes is 30 percent or less for a short battery or 35 percent or less for a tall battery, you may keep the oven on the decreased coking time and return the oven to the 90-day reading rotation described in paragraph (a)(1) of this section. If the average opacity of either push exceeds 30 percent for a short battery or 35 percent for a tall battery, the attempt to qualify for a decreased coking time was unsuccessful. You must then return the oven to the previously established increased coking time, or implement other corrective action(s) and/or increased coking time. If you implement other corrective action and/or a coking time that is shorter than the previously established increased coking time, you must follow the procedures in paragraph (a)(6)(ii) of this section to confirm that the corrective action(s) and/or increased coking time was successful.

(iii) If the attempt to qualify for decreased coking time was unsuccessful as described in paragraph (a)(7)(ii) of this section, you may again attempt to qualify for decreased coking time for the oven. To do this, you must operate the oven on the decreased coking time. After no more than two coking cycles on the decreased coking time, you must observe and record the opacity of the first two pushes that are capable of being observed using the procedures in §63.7334(a). If the average opacity for each of the two pushes is 30 percent or less for a short battery or 35 percent or less for a tall battery, you may keep the oven on the decreased coking time and return the oven to the 90-day reading rotation described in paragraph (a)(1) of this section. If the average opacity of either push exceeds 30 percent for a short battery or 35 percent for a tall battery, the attempt to qualify for a decreased coking time was unsuccessful. You must then return the oven to the previously established increased coking time, or implement other corrective action(s) and/or increased coking time. If you implement other corrective action and/or a coking time that is shorter than the previously established increased coking time, you must follow the procedures in paragraph (a)(6)(ii) of this section to confirm that the corrective action(s) and/or increased coking time was successful.

(iv) You must report to the permitting authority as a deviation the second and any subsequent consecutive

unsuccessful attempts on the same oven to qualify for decreased coking time as described in paragraph (a)(7)(iii) of this section.

(b) As provided in §63.6(g), you may request to use an alternative to the work practice standards in paragraph (a) of this section.

§63.7292 What work practice standards must I meet for fugitive pushing emissions if I have a by-product coke oven battery with horizontal flues?

(a) You must comply with each of the requirements in paragraphs (a)(1) through (4) of this section.

(1) Prepare and operate by a written plan that will eliminate or minimize incomplete coking for each by-product coke oven battery with horizontal flues. You must submit the plan and supporting documentation to the Administrator (or delegated authority) for approval no later than 90 days after completing all observations and measurements required for the study in paragraph (a)(3) of this section or [INSERT DATE 1 YEAR FROM THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER], whichever is earlier. You must begin operating by the plan requirements by the compliance date that is specified in §63.7283. The written plan must identify minimum flue temperatures for different coking times and a battery-wide minimum acceptable flue temperature for any oven at any coking time.

(2) Submit the written plan and supporting

documentation to the Administrator (or delegated authority) for review and approval. Include all data collected during the study described in paragraph (a)(3) of this section. If the Administrator (or delegated authority) disapproves the plan, you must revise the plan as directed by the Administrator (or delegated authority) and submit the amended plan for approval. The Administrator (or delegated authority) may require you to collect and submit additional data. You must operate according to your submitted plan (or submitted amended plan, if any) until the Administrator (or delegated authority) approves your plan.

(3) You must base your written plan on a study that you conduct that meets each of the requirements listed in paragraphs (a)(3)(i) through (x) of this section.

(i) Initiate the study by [INSERT DATE 90 DAYS FROM THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]. Notify the Administrator (or delegated authority) at least 7 days prior to initiating the study according to the requirements in §63.7340(f).

(ii) Conduct the study under representative operating conditions, including but not limited to the range of moisture content and volatile matter in the coal that is charged.

(iii) Include every oven in the study and observe at least two pushes from each oven.

(iv) For each push observed, measure and record the

temperature of every flue within 2 hours before the scheduled pushing time. Document the oven number, date, and time the oven was charged and pushed, and calculate the net coking time.

(v) For each push observed, document the factors to be used to identify pushes that are incompletely coked. These factors must include (but are not limited to): average opacity during the push, average opacity during travel to the quench tower, average of six highest consecutive observations during both push and travel, highest single opacity reading, color of the emissions (especially noting any yellow or brown emissions), presence of excessive smoke during travel to the quench tower, percent volatile matter in the coke, percent volatile matter and percent moisture in the coal that is charged, and the date the oven was last rebuilt or completely relined. Additional documentation may be provided in the form of pictures or videotape of emissions during the push and travel. All opacity observations must be conducted in accordance with the procedures in §63.7334(a)(3) through (7).

(vi) Inspect the inside walls of the oven after each observed push for cool spots as indicated by a flue that is darker than others (the oven walls should be red hot) and record the results.

(vii) For each push observed, note where incomplete coking occurs if possible (e.g., coke side end, pusher side

end, top, or center of the coke mass). For any push with incomplete coking, investigate and document the probable cause.

(viii) Use the documented factors in paragraph (a)(3)(v) of this section to identify pushes that were completely coked and those that were not completely coked. Provide a rationale for the determination based on the documentation of factors observed during the study.

(ix) Use only the flue temperature and coking time data for pushes that were completely coked to identify minimum flue temperatures for various coking times. Submit the criteria used to determine complete coking, as well as a table of coking times and corresponding temperatures for complete coking as part of your plan.

(x) Determine the battery-wide minimum acceptable flue temperature for any oven. This temperature will be equal to the lowest temperature that provided complete coking as determined in paragraph (a)(3)(ix) of this section.

(4) You must operate according to the coking times and temperatures in your approved plan and the requirements in paragraphs (a)(4)(i) through (viii) of this section.

(i) Measure and record the percent volatile matter in the coal that is charged.

(ii) Measure and record the temperature of all flues on two ovens per day within 2 hours before the scheduled pushing time for each oven. Measure and record the

temperature of all flues on each oven at least once each month.

(iii) For each oven observed in accordance with paragraph (a)(4)(ii) of this section, record the time each oven is charged and pushed and calculate and record the net coking time. If any measured flue temperature for an oven is below the minimum flue temperature for an oven's scheduled coking time as established in the written plan, increase the coking time for the oven to the coking time in the written plan for the observed flue temperature before pushing the oven.

(iv) If you increased the coking time for any oven in accordance with paragraph (a)(4)(iii) of this section, you must investigate the cause of the low flue temperature and take corrective action to fix the problem. You must continue to measure and record the temperature of all flues for the oven within 2 hours before each scheduled pushing time until the measurements meet the minimum temperature requirements for the increased coking time for two consecutive pushes. If any measured flue temperature for an oven on increased coking time falls below the minimum flue temperature for the increased coking time, as established in the written plan, you must increase the coking time for the oven to the coking time specified in the written plan for the observed flue temperature before pushing the oven. The oven must continue to operate at this coking time (or at a

longer coking time if the temperature falls below the minimum allowed for the increased coking time) until the problem has been corrected, and you have confirmed that the corrective action was successful as required by paragraph (a) (4) (v) of this section.

(v) Once the heating problem has been corrected, the oven may be returned to the battery's normal coking schedule. You must then measure and record the flue temperatures for the oven within 2 hours before the scheduled pushing time for the next two consecutive pushes. If any flue temperature measurement is below the minimum flue temperature for that coking time established in the written plan, repeat the procedures in paragraphs (a) (4) (iii) and (iv) of this section.

(vi) If any flue temperature measurement is below the battery-wide minimum acceptable temperature for complete coking established in the written plan for any oven at any coking time, you must remove the oven from service for repairs.

(vii) For an oven that has been repaired and returned to service after being removed from service in accordance with paragraph (a) (4) (vi) of this section, you must measure and record the temperatures of all flues for the oven within 2 hours before the first scheduled pushing time. If any flue temperature measurement is below the minimum flue temperature for the scheduled coking time, as established in

the written plan, you must repeat the procedures described in paragraphs (a)(4)(iii) and (iv) of this section.

(viii) For an oven that has been repaired and returned to service after removal from service in accordance with paragraph (a)(4)(vi) of this section, you must report as a deviation to the permitting authority any flue temperature measurement made during the initial coking cycle after return to service that is below the lowest acceptable minimum flue temperature.

(b) As provided in §63.6(g), you may request to use an alternative to the work practice standards in paragraph (a) of this section.

§63.7293 What work practice standards must I meet for fugitive pushing emissions if I have a non-recovery coke oven battery?

(a) You must meet the requirements in paragraphs (a)(1) and (2) of this section for each new and existing non-recovery coke oven battery.

(1) You must visually inspect each oven prior to pushing by opening the door damper and observing the bed of coke.

(2) Do not push the oven unless the visual inspection indicates that there is no smoke in the open space above the coke bed and that there is an unobstructed view of the door on the opposite side of the oven.

(b) As provided in §63.6(g), you may request to use an

alternative to the work practice standard in paragraph (a) of this section.

§63.7294 What work practice standard must I meet for soaking?

(a) For each new and existing by-product coke oven battery, you must prepare and operate at all times according to a written work practice plan for soaking. Each plan must include measures and procedures to:

(1) Train topside workers to identify soaking emissions that require corrective actions.

(2) Damper the oven off the collecting main prior to opening the standpipe cap.

(3) Determine the cause of soaking emissions that do not ignite automatically, including emissions that result from raw coke oven gas leaking from the collecting main through the damper, and emissions that result from incomplete coking.

(4) If soaking emissions are caused by leaks from the collecting main, take corrective actions to eliminate the soaking emissions. Corrective actions may include, but are not limited to, reseating the damper, cleaning the flushing liquor piping, using aspiration, putting the oven back on the collecting main, or igniting the emissions.

(5) If soaking emissions are not caused by leaks from the collecting main, notify a designated responsible party. The responsible party must determine whether the soaking

emissions are due to incomplete coking. If incomplete coking is the cause of the soaking emissions, you must put the oven back on the collecting main until it is completely coked or you must ignite the emissions.

(b) As provided in §63.6(g), you may request to use an alternative to the work practice standard in paragraph (a) of this section.

§63.7295 What requirements must I meet for quenching?

(a) You must meet the requirements in paragraphs (a)(1) and (2) of this section for each quench tower and backup quench station at a new or existing coke oven battery.

(1) For the quenching of hot coke, you must meet the requirements in paragraph (a)(1)(i) or (ii) of this section.

(i) The concentration of total dissolved solids (TDS) in the water used for quenching must not exceed 1,100 milligrams per liter (mg/L); or

(ii) The sum of the concentrations of benzene, benzo(a)pyrene, and naphthalene in the water used for quenching must not exceed the applicable site-specific limit approved by the permitting authority.

(2) You must use acceptable makeup water, as defined in §63.7352, as makeup water for quenching.

(b) For each quench tower at a new or existing coke oven battery and each backup quench station at a new coke oven battery, you must meet each of the requirements in

paragraphs (b)(1) through (4) of this section.

(1) You must equip each quench tower with baffles such that no more than 5 percent of the cross sectional area of the tower may be uncovered or open to the sky.

(2) You must wash the baffles in each quench tower once each day that the tower is used to quench coke, except as specified in paragraphs (b)(2)(i) and (ii) of this section.

(i) You are not required to wash the baffles in a quench tower if the highest measured ambient temperature remains less than 30 degrees Fahrenheit throughout that day (24-hour period). If the measured ambient temperature rises to 30 degrees Fahrenheit or more during the day, you must resume daily washing according to the schedule in your operation and maintenance plan.

(ii) You must continuously record the ambient temperature on days that the baffles were not washed.

(3) You must inspect each quench tower monthly for damaged or missing baffles and blockage.

(4) You must initiate repair or replacement of damaged or missing baffles within 30 days and complete as soon as practicable.

(c) As provided in §63.6(g), you may request to use an alternative to the work practice standards in paragraph (b) of this section.

§63.7296 What emission limitations must I meet for battery

stacks?

You must not discharge to the atmosphere any emissions from any battery stack at a new or existing by-product coke oven battery that exhibit an opacity greater than the applicable limit in paragraphs (a) and (b) of this section.

(a) Daily average of 15 percent opacity for a battery on a normal coking cycle.

(b) Daily average of 20 percent opacity for a battery on batterywide extended coking.

Operation and Maintenance Requirements

§63.7300 What are my operation and maintenance requirements?

(a) As required by §63.6(e)(1)(i), you must always operate and maintain your affected source, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart.

(b) You must prepare and operate at all times according to a written operation and maintenance plan for the general operation and maintenance of new or existing by-product coke oven batteries. Each plan must address, at a minimum, the elements listed in paragraphs (b)(1) through (6) of this section.

(1) Frequency and method of recording underfiring gas parameters.

(2) Frequency and method of recording battery operating temperature, including measurement of individual flue and cross-wall temperatures.

(3) Procedures to prevent pushing an oven before it is fully coked.

(4) Procedures to prevent overcharging and undercharging of ovens, including measurement of coal moisture, coal bulk density, and procedures for determining volume of coal charged.

(5) Frequency and procedures for inspecting flues, burners, and nozzles.

(6) Schedule and procedures for the daily washing of baffles.

(c) You must prepare and operate at all times according to a written operation and maintenance plan for each capture system and control device applied to pushing emissions from a new or existing coke oven battery. Each plan must address at a minimum the elements in paragraphs (c)(1) through (3) of this section.

(1) Monthly inspections of the equipment that are important to the performance of the total capture system (e.g., pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). The

operation and maintenance plan must also include requirements to repair any defect or deficiency in the capture system before the next scheduled inspection.

(2) Preventative maintenance for each control device, including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance.

(3) Corrective action for all baghouses applied to pushing emissions. In the event a bag leak detection system alarm is triggered, you must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete the corrective action as soon as practicable. Actions may include, but are not limited to:

(i) Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in emissions.

(ii) Sealing off defective bags or filter media.

(iii) Replacing defective bags or filter media or otherwise repairing the control device.

(iv) Sealing off a defective baghouse compartment.

(v) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

(vi) Shutting down the process producing the particulate emissions.

General Compliance Requirements

§63.7310 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations, work practice standards, and operation and maintenance requirements in this subpart at all times, except during periods of startup, shutdown, and malfunction as defined in §63.2.

(b) During the period between the compliance date specified for your affected source in §63.7283 and the date upon which continuous monitoring systems have been installed and certified and any applicable operating limits have been set, you must maintain a log detailing the operation and maintenance of the process and emissions control equipment.

(c) You must develop and implement a written startup, shutdown, and malfunction plan according to the provisions in §63.6(e)(3).

Initial Compliance Requirements

§63.7320 By what date must I conduct performance tests or other initial compliance demonstrations?

(a) As required in §63.7(a)(2), you must conduct a performance test to demonstrate compliance with each limit in §63.7290(a) for emissions of particulate matter from a control device applied to pushing emissions that applies to you within 180 calendar days after the compliance date that is specified in §63.7283.

(b) You must conduct performance tests to demonstrate compliance with the TDS limit or constituent limit for quench water in §63.7295(a)(1) and each opacity limit in §63.7297(a) for a by-product coke oven battery stack by the compliance date that is specified in §63.7283.

(c) For each work practice standard and operation and maintenance requirement that applies to you, you must demonstrate initial compliance within 30 calendar days after the compliance date that is specified in §63.7283.

(d) If you commenced construction or reconstruction between July 3, 2001 and [INSERT DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER], you must demonstrate initial compliance with either the proposed emission limit or the promulgated emission limit no later than [INSERT DATE 180 DAYS FROM THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER] or no later than 180 calendar days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(e) If you commenced construction or reconstruction between July 3, 2001 and [INSERT DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER], and you chose to comply with the proposed emission limit when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limit by [INSERT DATE 3 YEARS AND 180 DAYS FROM THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER], or

after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

§63.7321 When must I conduct subsequent performance tests?

For each control device subject to an emission limit for particulate matter in §63.7290(a), you must conduct subsequent performance tests no less frequently than twice (at mid-term and renewal) during each term of your title V operating permit.

§63.7322 What test methods and other procedures must I use to demonstrate initial compliance with the emission limits for particulate matter?

(a) You must conduct each performance test that applies to your affected source according to the requirements in paragraph (b) of this section.

(b) To determine compliance with the emission limit for particulate matter from a control device applied to pushing emissions where a cokeside shed is the capture system, follow the test methods and procedures in paragraphs (b)(1) and (2) of this section. To determine compliance with a process-weighted mass rate of particulate matter (lb/ton of coke) from a control device applied to pushing emissions where a cokeside shed is not used, follow the test methods and procedures in paragraphs (b)(1) through (4) of this section.

(1) Determine the concentration of particulate matter according to the following test methods in appendix A to 40

CFR part 60.

(i) Method 1 to select sampling port locations and the number of traverse points. Sampling sites must be located at the outlet of the control device and prior to any releases to the atmosphere.

(ii) Method 2, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 5 or 5D, as applicable, to determine the concentration of front half particulate matter in the stack gas.

(2) During each particulate matter test run, sample only during periods of actual pushing when the capture system fan and control device are engaged. Collect a minimum sample volume of 30 cubic feet of gas during each test run. Three valid test runs are needed to comprise a performance test. Each run must start at the beginning of a push and finish at the end of a push (i.e., sample for an integral number of pushes).

(3) Determine the total combined weight in tons of coke pushed during the duration of each test run according to the procedures in your source test plan for calculating coke yield from the quantity of coal charged to an

individual oven.

(4) Compute the process-weighted mass emissions (E_p) for each test run using Equation 1 of this section as follows:

Where:

E_p = Process weighted mass emissions of particulate matter, lb/ton;
 C = Concentration of particulate matter, gr/dscf;
 Q = Volumetric flow rate of stack gas, dscf/hr;
 T = Total time during a run that a sample is withdrawn from the stack during pushing, hr;
 P = Total amount of coke pushed during the test run, tons; and
 K = Conversion factor, 7,000 gr/lb.

§63.7323 What procedures must I use to establish operating

$$E_p = \frac{C \times Q \times T}{P \times K} \quad (\text{Eq. 1})$$

limits?

(a) For a venturi scrubber applied to pushing emissions from a coke oven battery, you must establish site-specific operating limits for pressure drop and scrubber water flow rate according to the procedures in paragraphs (a)(1) and (2) of this section.

(1) Using the continuous parameter monitoring systems

(CPMS) required in §63.7330(b), measure and record the pressure drop and scrubber water flow rate for each particulate matter test run during periods of pushing. A minimum of one pressure drop measurement and one scrubber water flow rate measurement must be obtained for each push.

(2) Compute and record the average pressure drop and scrubber water flow rate for each test run. Your operating limits are the lowest average pressure drop and scrubber water flow rate values recorded during any of the three runs that meet the applicable emission limit.

(b) For a hot water scrubber applied to pushing emissions from a coke oven battery, you must establish site-specific operating limits for water pressure and water temperature according to the procedures in paragraphs (b)(1) and (2) of this section.

(1) Using the CPMS required in §63.7330(c), measure and record the hot water pressure and temperature for each particulate matter test run during periods of pushing. A minimum of one pressure measurement and one temperature measurement must be made just prior to each push by monitoring the hot water holding tank on the mobile scrubber car.

(2) Compute and record the average water pressure and temperature for each test run. Your operating limits are the lowest pressure and temperature values recorded during any of the three runs that meet the applicable emission

limit.

(c) For a capture system applied to pushing emissions from a coke oven battery, you must establish a site-specific operating limit for the fan motor amperes or volumetric flow rate according to the procedures in paragraph (c)(1) or (2) of this section.

(1) If you elect the operating limit in §63.7290(b)(3)(i) for fan motor amperes, measure and record the fan motor amperes during each push sampled for each particulate matter test run. Your operating limit is the lowest fan motor amperes recorded during any of the three runs that meet the emission limit.

(2) If you elect the operating limit in §63.7290(b)(3)(ii) for volumetric flow rate, measure and record the total volumetric flow rate at the inlet of the control device during each push sampled for each particulate matter test run. Your operating limit is the lowest volumetric flow rate recorded during any of the three runs that meet the emission limit.

(d) You may change the operating limit for a scrubber or capture system if you meet the requirements in paragraphs (d)(1) through (3) of this section.

(1) Submit a written notification to the Administrator of your request to conduct a new performance test to revise the operating limit.

(2) Conduct a performance test to demonstrate that

emissions of particulate matter from the control device do not exceed the applicable limit in §63.7290(a).

(3) Establish revised operating limits according to the applicable procedures in paragraph (a) through (c) of this section.

§63.7324 What procedures must I use to demonstrate initial compliance with the opacity limits?

(a) You must conduct each performance test that applies to your affected source according to the requirements in paragraph (b) of this section.

(b) To determine compliance with the daily average opacity limit for stacks of 15 percent for a by-product coke oven battery on a normal coking cycle or 20 percent for a by-product coke oven battery on batterywide extended coking, follow the test methods and procedures in paragraphs (b)(1) through (3) of this section.

(1) Using the continuous opacity monitoring system (COMS) required in §63.7330(e), measure and record the opacity of emissions from each battery stack for a 24-hour period.

(2) Reduce the monitoring data to hourly averages as specified in §63.8(g)(2).

(3) Compute and record the 24-hour (daily) average of the COMS data.

§63.7325 What test methods and other procedures must I use to demonstrate initial compliance with the TDS or

constituent limits for quench water?

(a) If you elect the TDS limit for quench water in §63.7295(a)(1)(i), you must conduct each performance test that applies to your affected source according to the conditions in paragraphs (a)(1) and (2) of this section.

(1) Take the quench water sample from a location that provides a representative sample of the quench water as applied to the coke (e.g., from the header that feeds water to the quench tower reservoirs). Conduct sampling under normal and representative operating conditions.

(2) Determine the TDS concentration of the sample using Method 160.1 in 40 CFR part 136.3 (see 'residue - filterable'), except that you must dry the total filterable residue at 103 to 105 °C (degrees Centigrade) instead of 180 °C.

(b) If at any time you elect to meet the alternative requirements for quench water in §63.7295(a)(1)(ii), you must establish a site-specific constituent limit according to the procedures in paragraphs (b)(1) through (4) of this section.

(1) Take a minimum of nine quench water samples from a location that provides a representative sample of the quench water as applied to the coke (e.g., from the header that feeds water to the quench tower reservoirs). Conduct sampling under normal and representative operating conditions.

(2) For each sample, determine the TDS concentration according to the requirements in paragraph (a)(2) of this section and the concentration of benzene, benzo(a)pyrene, and naphthalene using the applicable methods in 40 CFR part 136 or an approved alternative method.

(3) Determine and record the highest sum of the concentrations of benzene, benzo(a)pyrene, and naphthalene in any sample that has a TDS concentration less than or equal to the TDS limit of 1,100 mg/L. This concentration is the site-specific constituent limit.

(4) Submit the site-specific limit, sampling results, and all supporting data and calculations to your permitting authority for review and approval.

(c) If you elect the constituent limit for quench water in §63.7295(a)(1)(ii), you must conduct each performance test that applies to your affected source according to the conditions in paragraphs (c)(1) and (2) of this section.

(1) Take a quench water sample from a location that provides a representative sample of the quench water as applied to the coke (e.g., from the header that feeds water to the quench tower reservoirs). Conduct sampling under normal and representative operating conditions.

(2) Determine the sum of the concentration of benzene, benzo(a)pyrene, and naphthalene in the sample using the applicable methods in 40 CFR part 136 or an approved

alternative method.

§63.7326 How do I demonstrate initial compliance with the emission limitations that apply to me?

(a) For each coke oven battery subject to the emission limit for particulate matter from a control device applied to pushing emissions, you have demonstrated initial compliance if you meet the requirements in paragraphs (a)(1) through (4) of this section that apply to you.

(1) The concentration of particulate matter, measured in accordance with the performance test procedures in §63.7322(b)(1) and (2), did not exceed 0.01 gr/dscf for a control device where a cokeside shed is used to capture pushing emissions or the process-weighted mass rate of particulate matter (lb/ton of coke), measured in accordance with the performance test procedures in §63.7322(b)(1) through (4), did not exceed:

(i) 0.02 lb/ton of coke if a moveable hood vented to a stationary control device is used to capture emissions;

(ii) If a mobile scrubber car that does not capture emissions during travel is used, 0.03 lb/ton of coke from a control device applied to pushing emissions from a short coke oven battery or 0.01 lb/ton of coke from a control device applied to pushing emissions from a tall coke oven battery; and

(iii) 0.04 lb/ton of coke if a mobile scrubber car that captures emissions during travel is used.

(2) For each venturi scrubber applied to pushing emissions, you have established appropriate site-specific operating limits and have a record of the pressure drop and scrubber water flow rate measured during the performance test in accordance with §63.7323(a).

(3) For each hot water scrubber applied to pushing emissions, you have established appropriate site-specific operating limits and have a record of the water pressure and temperature measured during the performance test in accordance with §63.7323(b).

(4) For each capture system applied to pushing emissions, you have established an appropriate site-specific operating limit, and:

(i) If you elect the operating limit in §63.7290(b)(3)(i) for fan motor amperes, you have a record of the fan motor amperes during the performance test in accordance with §63.7323(c)(1); or

(ii) If you elect the operating limit in §63.7290(b)(3)(ii) for volumetric flow rate, you have a record of the total volumetric flow rate at the inlet of the control device measured during the performance test in accordance with §63.7323(c)(2).

(b) For each new or existing by-product coke oven battery subject to the opacity limit for stacks in §63.7296(a), you have demonstrated initial compliance if the daily average opacity, as measured according to the

performance test procedures in §63.7324(b), is no more than 15 percent for a battery on a normal coking cycle or 20 percent for a battery on batterywide extended coking.

(c) For each new or existing by-product coke oven battery subject to the TDS limit or constituent limits for quench water in §63.7295(a)(1),

(1) You have demonstrated initial compliance with the TDS limit in §63.7295(a)(1)(i) if the TDS concentration, as measured according to the performance test procedures in §63.7325(a), does not exceed 1,100 mg/L.

(2) You have demonstrated initial compliance with the constituent limit in §63.7295(a)(1)(ii) if:

(i) You have established a site-specific constituent limit according to the procedures in §63.7325(b); and

(ii) The sum of the constituent concentrations, as measured according to the performance test procedures in §63.7325(c), is less than or equal to the site-specific limit.

(d) For each by-product coke oven battery stack subject to an opacity limit in §63.7296(a) and each by-product coke oven battery subject to the requirements for quench water in §63.7295(a)(1), you must submit a notification of compliance status containing the results of the COMS performance test for battery stacks and the quench water performance test (TDS or constituent limit) according to §63.7340(e)(1). For each particulate matter emission

limitation that applies to you, you must submit a notification of compliance status containing the results of the performance test according to §63.7340(e)(2).

§63.7327 How do I demonstrate initial compliance with the work practice standards that apply to me?

(a) For each by-product coke oven battery with vertical flues subject to the work practice standards for fugitive pushing emissions in §63.7291(a), you have demonstrated initial compliance if you certify in your notification of compliance status that you will meet each of the work practice requirements beginning no later than the compliance date that is specified in §63.7283.

(b) For each by-product coke oven battery with horizontal flues subject to the work practice standards for fugitive pushing emissions in §63.7292(a), you have demonstrated initial compliance if you have met the requirements of paragraphs (b)(1) and (2) of this section:

(1) You have prepared and submitted a written plan and supporting documentation establishing appropriate minimum flue temperatures for different coking times and the lowest acceptable temperature to the Administrator (or delegated authority) for review and approval; and

(2) You certify in your notification of compliance status that you will meet each of the work practice requirements beginning no later than the compliance date that is specified in §63.7283.

(c) For each non-recovery coke oven battery subject to the work practice standards for fugitive pushing emissions in §63.7293(a), you have demonstrated initial compliance if you certify in your notification of compliance status that you will meet each of the work practice requirements beginning no later than the compliance date that is specified in §63.7283.

(d) For each by-product coke oven battery subject to the work practice standards for soaking in §63.7294, you have demonstrated initial compliance if you have met the requirements of paragraphs (d)(1) and (2) of this section:

(1) You have prepared and submitted a written work practice plan in accordance with §63.7294(a); and

(2) You certify in your notification of compliance status that you will meet each of the work practice requirements beginning no later than the compliance date that is specified in §63.7283.

(e) For each coke oven battery, you have demonstrated initial compliance with the work practice standards for quenching in §63.7295(b) if you certify in your notification of compliance status that you have met the requirements of paragraphs (e)(1) and (2) of this section:

(1) You have installed the required equipment in each quench tower; and

(2) You will meet each of the work practice requirements beginning no later than the compliance date

that is specified in §63.7283.

(f) For each work practice standard that applies to you, you must submit a notification of compliance status according to the requirements in §63.7340(e)(1).

§63.7328 How do I demonstrate initial compliance with the operation and maintenance requirements that apply to me?

You have demonstrated initial compliance if you certify in your notification of compliance status that you have met the requirements of paragraphs (a) through (d) of this section:

(a) You have prepared the operation and maintenance plans according to the requirements in §63.7300(b) and (c);

(b) You will operate each by-product coke oven battery and each capture system and control device applied to pushing emissions from a coke oven battery according to the procedures in the plans beginning no later than the compliance date that is specified in §63.7283;

(c) You have prepared a site-specific monitoring plan according to the requirements in §63.7331(b); and

(d) You submit a notification of compliance status according to the requirements in §63.7340(e).

Continuous Compliance Requirements

§63.7330 What are my monitoring requirements?

(a) For each baghouse applied to pushing emissions from a coke oven battery, you must at all times monitor the relative change in particulate matter loadings using a bag

leak detection system according to the requirements in §63.7331(a) and conduct inspections at their specified frequency according to the requirements in paragraphs (a)(1) through (8) of this section.

(1) Monitor the pressure drop across each baghouse cell each day to ensure pressure drop is within the normal operating range identified in the manual;

(2) Confirm that dust is being removed from hoppers through weekly visual inspections or equivalent means of ensuring the proper functioning of removal mechanisms;

(3) Check the compressed air supply for pulse-jet baghouses each day;

(4) Monitor cleaning cycles to ensure proper operation using an appropriate methodology;

(5) Check bag cleaning mechanisms for proper functioning through monthly visual inspection or equivalent means;

(6) Make monthly visual checks of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (knead or bent) or laying on their sides. You do not have to make this check for shaker-type baghouses using self-tensioning (spring-loaded) devices;

(7) Confirm the physical integrity of the baghouse through quarterly visual inspections of the baghouse interior for air leaks; and

(8) Inspect fans for wear, material buildup, and

corrosion through quarterly visual inspections, vibration detectors, or equivalent means.

(b) For each venturi scrubber applied to pushing emissions, you must at all times monitor the pressure drop and water flow rate using a CPMS according to the requirements in §63.7331(e).

(c) For each hot water scrubber applied to pushing emissions, you must at all times monitor the water pressure and temperature using a CPMS according to the requirements in §63.7331(f).

(d) For each capture system applied to pushing emissions, you must at all times monitor the fan motor amperes according to the requirements in §63.7331(g) or the volumetric flow rate according to the requirements in §63.7331(h).

(e) For each by-product coke oven battery, you must monitor at all times the opacity of emissions exiting each stack using a COMS according to the requirements in §63.7331(i).

§63.7331 What are the installation, operation, and maintenance requirements for my monitors?

(a) For each baghouse applied to pushing emissions, you must install, operate, and maintain each bag leak detection system according to the requirements in paragraphs (a)(1) through (7) of this section.

(1) The system must be certified by the manufacturer

to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less;

(2) The system must provide output of relative changes in particulate matter loadings;

(3) The system must be equipped with an alarm that will sound when an increase in relative particulate loadings is detected over a preset level. The alarm must be located such that it can be heard by the appropriate plant personnel;

(4) Each system that works based on the triboelectric effect must be installed, operated, and maintained in a manner consistent with the guidance document, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). You may install, operate, and maintain other types of bag leak detection systems in a manner consistent with the manufacturer's written specifications and recommendations;

(5) To make the initial adjustment of the system, establish the baseline output by adjusting the sensitivity (range) and the averaging period of the device. Then, establish the alarm set points and the alarm delay time;

(6) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in your operation and maintenance plan. Do not increase the

sensitivity by more than 100 percent or decrease the sensitivity by more than 50 percent over a 365-day period unless a responsible official certifies, in writing, that the baghouse has been inspected and found to be in good operating condition; and

(7) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(b) For each CPMS required in §63.7330, you must develop and make available for inspection upon request by the permitting authority a site-specific monitoring plan that addresses the requirements in paragraphs (b)(1) through (6) of this section.

(1) Installation of the CPMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

(2) Performance and equipment specifications for the sample interface, the parametric signal analyzer, and the data collection and reduction system;

(3) Performance evaluation procedures and acceptance criteria (e.g., calibrations);

(4) Ongoing operation and maintenance procedures in accordance with the general requirements of §§63.8(c)(1), (3), (4)(ii), (7), and (8);

(5) Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d); and

(6) Ongoing recordkeeping and reporting procedures in accordance the general requirements of §§63.10(c), (e)(1), and (e)(2)(i).

(c) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(d) You must operate and maintain the CPMS in continuous operation according to the site-specific monitoring plan.

(e) For each venturi scrubber applied to pushing emissions, you must install, operate, and maintain CPMS to measure and record the pressure drop across the scrubber and scrubber water flow rate during each push according to the requirements in paragraphs (b) through (d) of this section except as specified in paragraphs (e)(1) through (3) of this section.

(1) Each CPMS must complete a measurement at least once per push;

(2) Each CPMS must produce valid data for all pushes; and

(3) Each CPMS must determine and record the daily (24-hour) average of all recorded readings.

(f) For each hot water scrubber applied to pushing emissions, you must install, operate, and maintain CPMS to measure and record the water pressure and temperature during

each push according to the requirements in paragraphs (b) through (d) of this section, except as specified in paragraphs (e) (1) through (3) of this section.

(g) If you elect the operating limit in §63.7290(b) (3) (i) for a capture system applied to pushing emissions, you must install, operate, and maintain a device to measure the fan motor amperes.

(h) If you elect the operating limit in §63.7290(b) (3) (ii) for a capture system applied to pushing emissions, you must install, operate, and maintain a device to measure the total volumetric flow rate at the inlet of the control device.

(i) For each by-product coke oven battery, you must install, operate, and maintain a COMS to measure and record the opacity of emissions exiting each stack according to the requirements in paragraphs (i) (1) through (5) of this section.

(1) You must install, operate, and maintain each COMS according to the requirements in §63.8(e) and Performance Specification 1 in 40 CFR part 60, appendix B. Identify periods the COMS is out-of-control, including any periods that the COMS fails to pass a daily calibration drift assessment, quarterly performance audit, or annual zero alignment audit.

(2) You must conduct a performance evaluation of each COMS according to the requirements in §63.8 and Performance

Specification 1 in appendix B to 40 CFR part 60;

(3) You must develop and implement a quality control program for operating and maintaining each COMS according to the requirements in §63.8(d). At minimum, the quality control program must include a daily calibration drift assessment, quarterly performance audit, and an annual zero alignment audit of each COMS;

(4) Each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period. You must reduce the COMS data as specified in §63.8(g)(2).

(5) You must determine and record the hourly and daily (24-hour) average opacity according to the procedures in §63.7324(b) using all the 6-minute averages collected for periods during which the COMS is not out-of-control.

§63.7332 How do I monitor and collect data to demonstrate continuous compliance?

(a) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), you must monitor continuously (or collect data at all required intervals) at all times the affected source is operating.

(b) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality

assurance or control activities in data averages and calculations used to report emission or operating levels, or in fulfilling a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing compliance. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitor to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

§63.7333 How do I demonstrate continuous compliance with the emission limitations that apply to me?

(a) For each control device applied to pushing emissions and subject to the emission limit in §63.7290(a), you must demonstrate continuous compliance by meeting the requirements in paragraphs (a)(1) and (2) of this section:

(1) Maintaining emissions of particulate matter at or below the applicable limits in paragraphs §63.7290(a)(1) through (4); and

(2) Conducting subsequent performance tests to demonstrate continuous compliance no less frequently than twice during each term of your title V operating permit (at mid-term and renewal).

(b) For each venturi scrubber applied to pushing emissions and subject to the operating limits in §63.7290(b)(1), you must demonstrate continuous compliance by meeting the requirements in paragraphs (b)(1) through (3)

of this section.

(1) Maintaining the daily average pressure drop and scrubber water flow rate at levels no lower than those established during the initial or subsequent performance test.

(2) Operating and maintaining each CPMS according to §63.7331(b) and recording all information needed to document conformance with these requirements.

(3) Collecting and reducing monitoring data for pressure drop and scrubber water flow rate according to §63.7331(e) (1) through (3).

(c) For each hot water scrubber applied to pushing emissions and subject to the operating limits in §63.7290(b) (2), you must demonstrate continuous compliance by meeting the requirements in paragraphs (c) (1) through (3) of this section.

(1) Maintaining the daily average water pressure and temperature at levels no lower than those established during the initial or subsequent performance test.

(2) Operating and maintaining each CPMS according to §63.7331(b) and recording all information needed to document conformance with these requirements.

(3) Collecting and reducing monitoring data for water pressure and temperature according to §63.7331(f).

(d) For each capture system applied to pushing emissions and subject to the operating limit in

§63.7290(b)(3), you must demonstrate continuous compliance by meeting the requirements in paragraph (d)(1) or (2) of this section:

(1) If you elect the operating limit for fan motor amperes in §63.7290(b)(3)(i):

(i) Maintaining the daily average fan motor amperes at or above the minimum level established during the initial or subsequent performance test; and

(ii) Checking the fan motor amperes at least every 8 hours to verify the daily average is at or above the minimum level established during the initial or subsequent performance test and recording the results of each check.

(2) If you elect the operating limit for volumetric flow rate in §63.7290(b)(3)(ii):

(i) Maintaining the daily average volumetric flow rate at the inlet of the control device at or above the minimum level established during the initial or subsequent performance test; and

(ii) Checking the volumetric flow rate at least every 8 hours to verify the daily average is at or above the minimum level established during the initial or subsequent performance test and recording the results of each check.

(e) Beginning on the first day compliance is required under §63.7283, you must demonstrate continuous compliance for each by-product coke oven battery subject to the opacity limit for stacks in §63.7296(a) by meeting the requirements

in paragraphs (e)(1) and (2) of this section:

(1) Maintaining the daily average opacity at or below 15 percent for a battery on a normal coking cycle or 20 percent for a battery on batterywide extended coking; and

(2) Operating and maintaining a COMS and collecting and reducing the COMS data according to §63.7331(i).

(f) Beginning on the first day compliance is required under §63.7283, you must demonstrate continuous compliance with the TDS limit for quenching in §63.7295(a)(1)(i) by meeting the requirements in paragraphs (f)(1) and (2) of this section:

(1) Maintaining the TDS content of the water used to quench hot coke at 1,100 mg/L or less; and

(2) Determining the TDS content of the quench water at least weekly according to the requirements in §63.7325(a) and recording the sample results.

(g) Beginning on the first day compliance is required under §63.7283, you must demonstrate continuous compliance with the constituent limit for quenching in §63.7295(a)(1)(ii) by meeting the requirements in paragraphs (g)(1) and (2) of this section:

(1) Maintaining the sum of the concentrations of benzene, benzo(a)pyrene, and naphthalene in the water used to quench hot coke at levels less than or equal to the site-specific limit approved by the permitting authority; and

(2) Determining the sum of the constituent

concentrations at least monthly according to the requirements in §63.7325(c) and recording the sample results.

§63.7334 How do I demonstrate continuous compliance with the work practice standards that apply to me?

(a) For each by-product coke oven battery with vertical flues subject to the work practice standards for fugitive pushing emissions in §63.7291(a), you must demonstrate continuous compliance according to the requirements of paragraphs (a)(1) through (8) of this section:

(1) Observe and record the opacity of fugitive emissions for four consecutive pushes per operating day, except you may make fewer or non-consecutive observations as permitted by §63.7291(a)(3). Maintain records of the pushing schedule for each oven and records indicating the legitimate operational reason for any change in the pushing schedule according to §63.7291(a)(4).

(2) Observe and record the opacity of fugitive emissions from each oven in a battery at least once every 90 days. If an oven cannot be observed during a 90-day period, observe and record the opacity of the first push of that oven following the close of the 90-day period that can be read in accordance with the procedures in paragraphs (a)(1) through (8) of this section.

(3) Make all observations and calculations for opacity

observations of fugitive pushing emissions in accordance with Method 9 in appendix A to 40 CFR part 60 using a Method 9 certified observer unless you have an approved alternative procedure under paragraph (a)(7) of this section.

(4) Record pushing opacity observations at 15-second intervals as required in section 2.4 of Method 9 (appendix A to 40 CFR part 60). The requirement in section 2.4 of Method 9 for a minimum of 24 observations does not apply, and the data reduction requirements in section 2.5 of Method 9 do not apply. The requirement in §63.6(h)(5)(ii)(B) for obtaining at least 3 hours of observations (thirty 6-minute averages) to demonstrate initial compliance does not apply.

(5) If fewer than six but at least four 15-second observations can be made, use the average of the total number of observations to calculate average opacity for the push. Missing one or more observations during the push (e.g., as the quench car passes behind a building) does not invalidate the observations before or after the interference for that push. However, a minimum of four 15-second readings must be made for a valid observation.

(6) Begin observations for a push at the first detectable movement of the coke mass. End observations of a push when the quench car enters the quench tower.

(i) For a battery without a cokeside shed, observe fugitive pushing emissions from a position at least 10 meters from the quench car that provides an unobstructed

view and avoids interferences from the topside of the battery. This may require the observer to be positioned at an angle to the quench car rather than perpendicular to it. Typical interferences to avoid include emissions from open standpipes and charging. Observe the opacity of emissions above the battery top with the sky as the background where possible. Record the oven number of any push not observed because of obstructions or interferences.

(ii) For a battery with a cokeside shed, the observer must be in a position that provides an unobstructed view and avoids interferences from the topside of the battery. Typical interferences to avoid include emissions from open standpipes and charging. Observations must include any fugitive emissions that escape from the top of the shed, from the ends of the shed, or from the area where the shed is joined to the battery. If the observer does not have a clear view to identify when a push starts or ends, a second person can be positioned to signal the start or end of the push and notify the observer when to start or end the observations. Radio communications with other plant personnel (e.g., pushing ram operator or quench car operator) may also serve to notify the observer of the start or end of a push. Record the oven number of any push not observed because of obstructions or interferences.

(iii) You may reposition after the push to observe emissions during travel if necessary.

(7) If it is infeasible to implement the procedures in paragraphs (a)(1) through (6) of this section for an oven due to physical obstructions, nighttime pushes, or other reasons, you may apply to your permitting authority for permission to use an alternative procedure. The application must provide a detailed explanation of why it is infeasible to use the procedures in paragraphs (a)(1) through (6) of this section, identify the oven and battery numbers, and describe the alternative procedure. An alternative procedure must identify whether the coke in that oven is not completely coked, either before, during, or after an oven is pushed.

(8) For each oven observed that exceeds an opacity of 30 percent for any short battery or 35 percent for any tall battery, you must take corrective action and/or increase the coking time in accordance with §63.7291(a). Maintain records documenting conformance with the requirements in §63.7291(a).

(b) For each by-product coke oven battery with horizontal flues subject to the work practice standards for fugitive pushing emissions in §63.7292(a), you must demonstrate continuous compliance by having met the requirements of paragraphs (b)(1) through (3) of this section:

(1) Measuring and recording the temperature of all flues on two ovens per day within 2 hours before the oven's

scheduled pushing time and ensuring that the temperature of each oven is measured and recorded at least once every month;

(2) Recording the time each oven is charged and pushed and calculating and recording the net coking time for each oven; and

(3) Increasing the coking time for each oven that falls below the minimum flue temperature trigger established for that oven's coking time in the written plan required in §63.7292(a)(1), assigning the oven to the oven-directed program, and recording all relevant information according to the requirements in §63.7292(a)(4) including, but not limited to, daily pushing schedules, diagnostic procedures, corrective actions, and oven repairs.

(c) For each non-recovery coke oven battery subject to the work practice standards in §63.7293(a), you must demonstrate continuous compliance by maintaining records that document each visual inspection of an oven prior to pushing and that the oven was not pushed unless there was no smoke in the open space above the coke bed and there was an unobstructed view of the door on the opposite side of the oven.

(d) For each by-product coke oven battery subject to the work practice standard for soaking in §63.7294(a), you must demonstrate continuous compliance by maintaining records that document conformance with requirements in

§63.7294(a)(1) through (5).

(e) For each coke oven battery subject to the work practice standard for quenching in §63.7295(b), you must demonstrate continuous compliance according to the requirements of paragraphs (e)(1) through (3) of this section:

(1) Maintaining baffles in each quench tower such that no more than 5 percent of the cross-sectional area of the tower is uncovered or open to the sky as required in §63.7295(b)(1);

(2) Maintaining records that document conformance with the washing, inspection, and repair requirements in §63.7295(b)(2), including records of the ambient temperature on any day that the baffles were not washed; and

(3) Maintaining records of the source of makeup water to document conformance with the requirement for acceptable makeup water in §63.7295(a)(2).

§63.7335 How do I demonstrate continuous compliance with the operation and maintenance requirements that apply to me?

(a) For each by-product coke oven battery, you must demonstrate continuous compliance with the operation and maintenance requirements in §63.7300(b) by adhering at all times to the plan requirements and recording all information needed to document conformance.

(b) For each coke oven battery with a capture system or control device applied to pushing emissions, you must

demonstrate continuous compliance with the operation and maintenance requirements in §63.7300(c) by meeting the requirements of paragraphs (b)(1) through (3) of this section:

(1) Making monthly inspections of capture systems according to §63.7300(c)(1) and recording all information needed to document conformance with these requirements;

(2) Performing preventative maintenance for each control device according to §63.7300(c)(2) and recording all information needed to document conformance with these requirements; and

(3) Initiating and completing corrective action for a bag leak detection system alarm according to §63.7300(c)(3) and recording all information needed to document conformance with these requirements. This includes records of the times the bag leak detection system alarm sounds, and for each valid alarm, the time you initiated corrective action, the corrective action(s) taken, and the date on which corrective action is completed.

(c) To demonstrate continuous compliance with the operation and maintenance requirements for a baghouse applied to pushing emissions from a coke oven battery in §63.7331(a), you must inspect and maintain each baghouse according to the requirements in §63.7331(a)(1) through (8) and record all information needed to document conformance with these requirements. If you increase or decrease the

sensitivity of the bag leak detection system beyond the limits specified in §63.7331(a)(6), you must include a copy of the required written certification by a responsible official in the next semiannual compliance report.

(d) You must maintain a current copy of the operation and maintenance plans required in §63.7300(b) and (c) onsite and available for inspection upon request. You must keep the plans for the life of the affected source or until the affected source is no longer subject to the requirements of this subpart.

§63.7336 What other requirements must I meet to demonstrate continuous compliance?

(a) Deviations. You must report each instance in which you did not meet each emission limitation in this subpart that applies to you. This includes periods of startup, shutdown, and malfunction. You must also report each instance in which you did not meet each work practice standard or operation and maintenance requirement in this subpart that applies to you. These instances are deviations from the emission limitations (including operating limits), work practice standards, and operation and maintenance requirements in this subpart. These deviations must be reported according to the requirements in §63.7341.

(b) Startup, shutdowns, and malfunctions. During periods of startup, shutdown, and malfunction, you must operate in accordance with your startup, shutdown, and

malfunction plan.

(1) Consistent with §§63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with the startup, shutdown, and malfunction plan.

(2) The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in §63.6(e).

Notification, Reports, and Records

§63.7340 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e) and (f)(4), and 63.9(b) through (h) that apply to you by the specified dates.

(b) As specified in §63.9(b)(2), if you startup your affected source before [INSERT DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER], you must submit your initial notification no later than [INSERT DATE 120 DAYS FROM THE DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER].

(c) As specified in §63.9(b)(3), if you startup your new affected source on or after [INSERT DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER], you must submit your initial notification no later than 120 calendar days

after you become subject to this subpart.

(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in §63.7(b)(1).

(e) If you are required to conduct a performance test, opacity observation, or other initial compliance demonstration, you must submit a notification of compliance status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration that does not include a performance test, you must submit the notification of compliance status before the close of business on the 30th calendar day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration that does include a performance test, you must submit the notification of compliance status, including the performance test results, before the close of business on the 60th calendar day following completion of the performance test according to §63.10(d)(2).

(f) For each by-product coke oven battery with horizontal flues, you must notify the Administrator (or delegated authority) of the date on which the study of flue temperatures required by §63.7292(a)(3) will be initiated. You must submit this notification no later than 7 days prior

to the date you initiate the study.

§63.7341 What reports must I submit and when?

(a) Compliance report due dates. Unless the Administrator has approved a different schedule, you must submit quarterly compliance reports for battery stacks and semiannual compliance reports for all other affected sources to your permitting authority according to the requirements in paragraphs (a)(1) through (4) of this section.

(1) The first quarterly compliance report for battery stacks must cover the period beginning on the compliance date that is specified for your affected source in §63.7283 and ending on the last date of the third calendar month. Each subsequent compliance report must cover the next calendar quarter.

(2) The first semiannual compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.7283 and ending on June 30 or December 31, whichever date comes first after the compliance date that is specified for your affected source. Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(3) All quarterly compliance reports for battery stacks must be postmarked or delivered no later than one calendar month following the end of the quarterly reporting period. All semiannual compliance reports must be

postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(4) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (a)(1) through (3) of this section.

(b) Quarterly compliance report contents. Each quarterly report must provide information on compliance with the emission limitations for battery stacks in §63.7296. The reports must include the information in paragraphs (c)(1) through (3), and as applicable, paragraphs (c)(4) through (8) of this section.

(c) Semiannual compliance report contents. Each compliance report must provide information on compliance with the emission limitations, work practice standards, and operation and maintenance requirements for all affected sources except battery stacks. The reports must include the information in paragraphs (c)(1) through (3) of this section, and as applicable, paragraphs (c)(4) through (8) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with the official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in §63.10(d)(5)(i).

(5) If there were no deviations from the continuous compliance requirements in §63.7333(e) for battery stacks, a statement that there were no deviations from the emission limitations during the reporting period. If there were no deviations from the continuous compliance requirements in §§63.7333 through 63.7335 that apply to you (for all affected sources other than battery stacks), a statement that there were no deviations from the emission limitations, work practice standards, or operation and maintenance requirements during the reporting period.

(6) If there were no periods during which a continuous monitoring system (including COMS, continuous emission monitoring system (CEMS), or CPMS) was out-of-control as specified in §63.8(c)(7), a statement that there were no periods during which a continuous monitoring system was out-

of-control during the reporting period.

(7) For each deviation from an emission limitation in this subpart (including quench water limits) and for each deviation from the requirements for work practice standards in this subpart that occurs at an affected source where you are not using a continuous monitoring system (including a COMS, CEMS, or CPMS) to comply with the emission limitations in this subpart, the compliance report must contain the information in paragraphs (c)(4) and (7)(i) and (ii) of this section. This includes periods of startup, shutdown, and malfunction.

(i) The total operating time of each affected source during the reporting period.

(ii) Information on the number, duration, and cause of deviations (including unknown cause, if applicable) as applicable and the corrective action taken.

(8) For each deviation from an emission limitation occurring at an affected source where you are using a continuous monitoring system (including COMS, CEMS, or CPMS) to comply with the emission limitation in this subpart, you must include the information in paragraphs (c)(4) and (8)(i) through (xii) of this section. This includes periods of startup, shutdown, and malfunction.

(i) The date and time that each malfunction started and stopped.

(ii) The date and time that each continuous monitoring

system (including COMS, CEMS, or CPMS) was inoperative, except for zero (low-level) and high-level checks.

(iii) The date, time, and duration that each continuous monitoring system (including COMS, CEMS, or CPMS) was out-of-control, including the information in §63.8(c)(8).

(iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(v) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(vi) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(vii) A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of continuous monitoring system downtime as a percent of the total source operating time during the reporting period.

(viii) An identification of each HAP that was monitored at the affected source.

(ix) A brief description of the process units.

(x) A brief description of the continuous monitoring system.

(xi) The date of the latest continuous monitoring system certification or audit.

(xii) A description of any changes in continuous monitoring systems, processes, or controls since the last reporting period.

(d) Immediate startup, shutdown, and malfunction report. If you had a startup, shutdown, or malfunction during the semiannual reporting period that was not consistent with your startup, shutdown, and malfunction plan, you must submit an immediate startup, shutdown, and malfunction report according to the requirements in §63.10(d)(5)(ii).

(e) Part 70 monitoring report. If you have obtained a title V operating permit for an affected source pursuant to 40 CFR part 70 or 40 CFR part 71, you must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If you submit a compliance report for an affected source along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all the required information concerning deviations from any emission limitation or work

practice standard in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report does not otherwise affect any obligation you may have to report deviations from permit requirements to your permitting authority.

§63.7342 What records must I keep?

(a) You must keep the records specified in paragraphs (a)(1) through (3) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any initial notification or notification of compliance status that you submitted, according to the requirements in §63.10(b)(2)(xiv).

(2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests, performance evaluations, and opacity observations as required in §63.10(b)(2)(viii).

(b) For each COMS or CEMS, you must keep the records specified in paragraphs (b)(1) through (4) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Monitoring data for COMS during a performance evaluation as required in §63.6(h)(7)(i) and (ii).

(3) Previous (that is, superceded) versions of the performance evaluation plan as required in §63.8(d)(3).

(4) Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(c) You must keep the records in §63.6(h)(6) for visual observations.

(d) You must keep the records required in §§63.7333 through 63.7335 to show continuous compliance with each emission limitation, work practice standard, and operation and maintenance requirement that applies to you.

§63.7343 In what form and how long must I keep my records?

(a) You must keep your records in a form suitable and readily available for expeditious review, according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records offsite for the remaining 3 years.

Other Requirements and Information§63.7350 What parts of the General Provisions apply to me?

Table 1 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

§63.7351 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the United States Environmental Protection Agency (U.S. EPA), or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities in paragraphs (c)(1) through (6) of this section will not be delegated to State, local, or tribal agencies.

(1) Approval of alternatives to work practice standards for fugitive pushing emissions in §63.7291(a) for a by-product coke oven battery with vertical flues, fugitive

pushing emissions in §63.7292(a) for a by-product coke oven battery with horizontal flues, fugitive pushing emissions in §63.7293 for a non-recovery coke oven battery, soaking for a by-product coke oven battery in §63.7294(a), and quenching for a coke oven battery in §63.7295(b) under §63.6(g).

(2) Approval of alternative opacity emission limitations for a by-product coke oven battery under §63.6(h)(9).

(3) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90, except for alternative procedures in §63.7334(a)(7).

(4) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(5) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(6) Approval of the work practice plan for by-product coke oven batteries with horizontal flues submitted under §63.7292(a)(1).

§63.7352 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA), in §63.2, and in this section as follows:

Acceptable makeup water means surface water from a river, lake, or stream; water meeting drinking water standards; storm water runoff and production area clean up water except for water from the by-product recovery plant area; process wastewater treated to meet effluent

limitations guidelines in 40 CFR part 420; water from any of these sources that has been used only for non-contact cooling or in water seals; or water from scrubbers used to control pushing emissions.

Backup quench station means a quenching device that is used for less than 5 percent of the quenches from any single coke oven battery in the 12-month period from July 1 to June 30.

Baffles means an apparatus comprised of obstructions for checking or deflecting the flow of gases. Baffles are installed in a quench tower to remove droplets of water and particles from the rising vapors by providing a point of impact. Baffles may be installed either inside or on top of quench towers and are typically constructed of treated wood, steel, or plastic.

Battery stack means the stack that is the point of discharge to the atmosphere of the combustion gases from a battery's underfiring system.

Batterywide extended coking means increasing the average coking time for all ovens in the coke oven battery by 25 percent or more over the manufacturer's specified design rate.

By-product coke oven battery means a group of ovens connected by common walls, where coal undergoes destructive distillation under positive pressure to produce coke and coke oven gas from which by-products are recovered.

By-product recovery plant area means that area of the coke plant where process units subject to subpart L in part 61 are located.

Coke oven battery means a group of ovens connected by common walls, where coal undergoes destructive distillation to produce coke. A coke oven battery includes by-product and non-recovery processes.

Coke plant means a facility that produces coke from coal in either a by-product coke oven battery or a non-recovery coke oven battery.

Cokeside shed means a structure used to capture pushing emissions that encloses the cokeside of the battery and ventilates the emissions to a control device.

Coking time means the time interval that starts when an oven is charged with coal and ends when the oven is pushed.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limitation (including operating limits) or work practice standard;

- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Emission limitation means any emission limit, opacity limit, or operating limit.

Four consecutive pushes means four pushes observed successively.

Fugitive pushing emissions means emissions from pushing that are not collected by a capture system.

Horizontal flue means a type of coke oven heating system used on Semet-Solvay batteries where the heating flues run horizontally from one end of the oven to the other end, and the flues are not shared with adjacent ovens.

Hot water scrubber means a mobile scrubber used to control pushing emissions through the creation of an induced draft formed by the expansion of pressurized hot water through a nozzle.

Increased coking time means increasing the charge-to-push time for an individual oven.

Non-recovery coke oven battery means a group of ovens connected by common walls and operated as a unit, where coal undergoes destructive distillation under negative pressure to produce coke, and which is designed for the combustion of the coke oven gas from which by-products are not recovered.

Oven means a chamber in the coke oven battery in which

coal undergoes destructive distillation to produce coke.

Pushing means the process of removing the coke from the oven. Pushing begins with the first detectable movement of the coke mass and ends when the quench car enters the quench tower.

Quenching means the wet process of cooling (wet quenching) the hot incandescent coke by direct contact with water that begins when the quench car enters the quench tower and ends when the quench car exits the quench tower.

Quench tower means the structure in which hot incandescent coke in the quench car is deluged or quenched with water.

Remove from service means that an oven is not charged with coal and is not used for coking. When removed from service, the oven may remain at the operating temperature or it may be cooled down for repairs.

Responsible official means responsible official as defined in §63.2.

Short battery means a by-product coke oven battery with ovens less than five meters in height.

Soaking means that period in the coking cycle that starts when an oven is dampered off the collecting main and vented to the atmosphere through an open standpipe prior to pushing and ends when the coke begins to be pushed from the oven.

Soaking emissions means the discharge from an open

standpipe during soaking of visible emissions due to either incomplete coking or leakage into the standpipe from the collecting main.

Standpipe means an apparatus on the oven that provides a passage for gases from an oven to the atmosphere when the oven is dampered off the collecting main and the standpipe cap is opened. This includes mini-standpipes that are not connected to the collecting main.

Tall battery means a by-product coke oven battery with ovens five meters or more in height.

Vertical flue means a type of coke oven heating system in which the heating flues run vertically from the bottom to the top of the oven, and flues are shared between adjacent ovens.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

Tables to Subpart CCCCC of Part 63

Table 1 to Subpart CCCCC of Part 63. Applicability of General Provisions to Subpart CCCCC

As required in §63.7350, you must comply with each applicable requirement of the NESHAP General Provisions (40 CFR part 63, subpart A) as shown in the following table:

Citation	Subject	Applies to Subpart CCCCC?	Explanation
§63.1	Applicability	Yes.	
§63.2	Definitions	Yes.	
§63.3	Units and Abbreviations	Yes.	
§63.4	Prohibited Activities	Yes.	
§63.5	Construction/Re construction	Yes.	
§63.6 (a), (b), (c), (d), (e), (f), (g), (h) (2) - (8)	Compliance with Standards and Maintenance Requirements	Yes.	
§63.6 (h) (9)	Adjustment to an Opacity Emission Standard	Yes.	
§63.7 (a) (3), (b), (c) - (h)	Performance Testing Requirements	Yes.	
§63.7 (a) (1) - (2)	Applicability and Performance Test Dates	No.	Subpart CCCCC specifies applicability and dates.
§63.8 (a) (1) - (3), (b), (c) (1) - (3), (c) (4) (i) - (ii), (c) (5) - (8), (d), (e), (f) (1) - (5), (g) (1) - (4)	Monitoring Requirements	Yes.	CMS requirements in §63.8 (c) (4) (i) - (ii), (c) (5), and (c) (6) apply only to COMS for battery stacks.

§63.8(a)(4)	Additional Monitoring Requirements for Control Devices in §63.11.	No.	Flares are not a control device for Subpart CCCCC affected sources.
§63.8(c)(4)	Continuous Monitoring System (CMS) Requirements	No.	Subpart CCCCC specifies requirements for operation of CMS.
§63.8(e)(4) - (5)	Performance Evaluations	Yes.	Except COMS performance evaluation must be conducted before the compliance date.
§63.8(f)(6)	RATA Alternative	No.	Subpart CCCCC does not require CEMS.
§63.8(g)(5)	Data Reduction	No.	Subpart CCCCC specifies data that can't be used in computing averages for COMS.
§63.9	Notification Requirements	Yes.	Additional notifications for CMS in §63.9(g) apply only to COMS for battery stacks.

§63.10 (a) , (b) (1) - (b) (2) (xii) , (b) (2) (xiv) , (b) (3) , (c) (1) - (6) , (c) (9) - (15) , (d) , (e) (1) - (2) , (e) (4) , (f)	Recordkeeping and Reporting Requirements	Yes.	Additional records for CMS in §63.10 (c) (1) - (6) , (9) - (15) , and reports in §63.10 (d) (1) - (2) apply only to COMS for battery stacks.
§63.10 (b) (2) (xi) - (xii)	CMS Records for RATA Alternative	No.	Subpart CCCCC doesn't require CEMS.
§63.10 (c) (7) - (8)	Records of Excess Emissions and Parameter Monitoring Exceedances for CMS	No.	Subpart CCCCC specifies record requirements.
§63.10 (e) (3)	Excess Emission Reports	No.	Subpart CCCCC specifies reporting requirements.
§63.11	Control Device Requirements	No.	Subpart CCCCC does not require flares.
§63.12	State Authority and Delegations.	Yes.	
§§63.13-63.15	Addresses, Incorporation by Reference, Availability of Information.	Yes.	